REPORT OF THE LIGHTNING RESEARCH COMMITTEE.

PREFACE.

By Sir Oliver Lodge, F.R.S.

SINCE the report, many years ago, of the Lightning Rod Conference, knowledge of the subject has considerably increased, and the effect of self-induction, which then was completely ignored, has been taken into account and understood. The main differences between what is recommended to-day and what was considered sufficient then depend on the recognition of the influence of self-induction or electrical inertia. Then electricity was treated as if it had no inertia, and as if all that was necessary was to get it from the clouds to earth as quickly and easily as possible by the shortest path: which may be called the drain-pipe theory. It was supposed that it would always take the easiest path, and that the easiest path would protect all others. Attention was directed to the quantity of electricity which had to be conveyed down, and to nothing else.

Now, however, it is perceived that it is not so much quantity of electricity that has to be attended to, as electrical energy; that this electrical energy is stored between clouds and earth in dangerous amount; and that our object should be to dissipate it, not as quickly, but as quietly as possible. A sudden dissipation of energy is always violent. No one in his senses wishes to stop a flywheel or a railway train suddenly; sudden or hasty dissipation is not what is wanted. Gun-cotton possesses a store of potential energy locked up in it to a dangerous extent: if it be dissipated suddenly, as by percussion, a violent explosion results; but if it be dissipated gradually, as by a flame, the energy is got rid of without much damage, beyond the liability to fire. An armour-plate may be able to stop a cannon-ball quickly, but a heap of sand or loose earth does it more safely, because more gradually.

So it is exactly with the store of energy beneath an electrified cloud, or between one cloud and another. A lightning conductor of perfect conductivity, if struck, would deal with the energy in far too rapid and sudden a manner, and the result would be equivalent to an explosion; a conductor of moderately high resistance, such as an iron wire, would get rid of it in a slower and therefore much safer and quieter manner; though with too thin a wire there may be a risk of fire.

The rush in any case, however, is likely to be rather violent; and, like an avalanche, it will not take the easiest path provided for it, as if it were a trickling stream, but will crash through obstacles and make its own path, some portion of it taking paths which would be quite unexpected. Hence no one path can be said to protect others, and the only way to protect a building with absolute completeness is to enclose it wholly in metal. An invisible cage or framework of iron wires, however, descending vertically down its salient features, with

the utilisation of any metal in its construction, suffices for all practical purposes, unless the building is a powder magazine.

The effect of *points*, and of rain also, in gradually dissipating a charge, and thereby contributing to safety, has long been understood; but the feature which has not been known is that there are cases when points are wholly inoperative, viz. when the energy is stored between cloud and cloud, instead of between cloud and earth, and when the initial discharge takes place from one cloud to another; then the lower cloud is liable suddenly to overflow to earth through a region in which there was no previous preparation, and where any number of points, or a rain shower, or any other form of gentle leak, would have been quite inoperative. Then can a violent discharge occur even to the sharpest point; and a hot column of air, such as rises up a chimney, is even preferred to a conductor. These are the flashes against which points and rain are no protection, and these are probably those which do the most damage to protected buildings. But it must be understood that when a flash does occur through a building, it matters little which kind of flash it is—both can be equally sudden and violent—but if the building is well provided with points, the first or prepared kind is not likely to occur, save in exceptional cases: the dangerous liability is then the sudden or overflow variety of flash.

These, then, are the two points of novelty:

1. The possible occurrence of a totally unprepared-for and sudden flash in previously unstrained air, by reason of overflow from a discharge initiated elsewhere: what is called the B spark, occurring as the secondary result of an A spark.

2. The effect of electrical inertia or momentum, so that the discharge is not a simple leak or flow in one direction, but a violent oscillation and splash or impulsive rush, much more like an explosion, and occurring in all directions at once, without much regard to the path which had been provided for it; no more regard, in fact, than is required to enable the greater part of it to take the good conductors, and to prevent any part of it from being able to enter a perfectly enclosed metallic building.

Even a small lateral fraction of a flash is able, however, to ignite gas if there is a leak, or even to *make* a leak at a "compo"-pipe where it is crossed by a bell wire, and then ignite it; hence, after a building has been struck, careful watch should be kept for some time against the danger of fire.

The amount of protection to be allotted to any building is no doubt analogous to the question of insurance generally; that is to say, the amount of premium it is desired to pay may be compared with the capital at stake and the risk run; and this is doubtless a matter for individuals and public bodies to consider for themselves. What the Committee can do is to make a study of cases of damage occurring to buildings which on the old lines were supposed to be protected, to tabulate them as below, and to ask for carefully recorded observations; they can also draw up such hints and suggestions as may be of use to architects whose clients desire their buildings to be protected in a more thorough, but not necessarily a more expensive, manner.

These objects, and these attempts at being useful, explain the existence of the present report.

PROCEEDINGS OF THE COMMITTEE.

Since the issue by the Lightning Rod Conference, in the year 1882, of the Code of Rules for the Erection of Lightning Conductors, which had been based on the results of an exhaustive inquiry extending over three or four years, no official record has been kept of disasters resulting to buildings from lightning stroke. The protective measures advocated by the Conference were understood to be in general adoption throughout the country, but no means were available for testing how far they had been efficacious in preserving buildings from injury. Numerous and serious cases of damage, however, had occurred to buildings supposed to be properly protected, and the feeling gained ground among those who were studying the subject that the system had failed to realise all that had been expected of it. This feeling was given expression to by H.M. Inspectors of Explosives in their Report for 1900. Commenting upon the disasters at the factories of the Nobel Explosives Company at Krummel and Hamm, Germany, the Inspectors stated that "these accidents have done much to confirm a feeling of distrust which has for some time been growing in our minds as to the absoluteness of the protection afforded by conductors erected in accordance with specifications laid down by the Lightning Rod Conference of 1882; and they go far to confirm on a large scale the interesting and instructive laboratory experiments of Dr. Oliver Lodge."

The difficulty experienced in obtaining accurate and intelligently rendered information as to the effect of lightning-strokes on buildings was referred to by Mr. Killingworth Hedges in his Paper on "The Protection of Public Buildings from Lightning," read before the Royal Institute of British Architects in April 1900. Ultimately, at the instance of Mr. Hedges, the Lightning Research Committee was formed by the Councils of the Royal Institute of British Architects and the Surveyors' Institution, with the object of obtaining trustworthy information on disasters from lightning as affecting buildings, of investigating the causes of the failure of lightning conductors to protect, and of suggesting, if possible, improved means of protection.

As first formed, the Committee was constituted as follows: Mr. John Slater, B.A., and Mr. H. Heathcote Statham, appointed by the Council of the Royal Institute of British Architects; Mr. A. R. Stenning and Mr. Arthur Vernon, appointed by the Council of the Surveyors' Institution; and Mr. Killingworth Hedges, M.Inst.C.E. A meeting-room, on the premises of the Royal Institute of British Architects, was kindly placed at the disposal of the Committee by the Institute Council.

The first meeting of the Committee was held on the 22nd January 1901, and as a result of a resolution then passed the following gentlemen were asked and consented to serve on the Committee: Sir Oliver Lodge, F.R.S., Principal of Birmingham University; Major-General E. R. Festing, C.B., F.R.S., Director of the Science Museum, South Kensington; Mr. J. Gavey, C.B., Engineer-in-Chief of the General Post Office; Mr. W. N. Shaw, F.R.S., appointed by the Royal Meteorological Society; and Mr. W. P. Goulding, F.R.G.S., F.S.I.

Mr. Killingworth Hedges, at the request of the Committee, consented to act as Hon. Secretary; and Mr. G. Northover, a member of the R.I.B.A. staff, was appointed Secretary.

Funds for carrying on the work of the Committee were provided as follows:

From the Royal Institute of British Architects and the Surveyors' Institution, the sum of 25*l.* per annum respectively for three years;

From the Government Grant for Scientific Investigations (administered by a Committee of the Royal Society), the sum of 20*l.*;

From the Royal Meteorological Society, the sum of 5*l.* 5*s.*

In order to obtain with as much exactitude as possible the information desired, and to save observers the trouble of furnishing details that would be valueless for the purpose of the inquiry, and also with a view to the more convenient tabulation thereafter of the facts reported, the following questions were drawn up and printed on one side only of a sheet of foolscap, the opposite side bearing corresponding numbers, and being left blank for the answers:—

1. *Name of building struck, and for what purpose used.*
   (*A photograph taken after the disaster would be useful.*)
2. *Date and hour of occurrence; name of place and county.*
3. *Description and situation of the building, and height above sea-level.*
   (*Give particulars as to its position with regard to other buildings and high trees, and its propinquity to any wells.*)
4. *Was rain falling when building was struck? If not, did rain precede or follow the stroke, and at what interval?*
5. *Was the building provided with lightning rods? If so, state number, position, height above roof, material (both of rod and staples), shape, sectional area, how finished at top and at bottom, condition of ends after flash*—i.e. *whether melted or blunted.*
   (*A sketch plan should be made, which should aim at being a sort of Röntgen-ray representation, the metal-work being shown a different shade from the brick and stone work.*)
6. *Was the conductor continuous? Describe the earth-connection. When was the conductor last examined and tested? Has the building been previously struck?*
7. *Nature of soil.*
8. *State fully the effect on the building; if any portion was set on fire; also if any damage occurred to metal-work, such as bells, rain-water and other pipes, electric bells or telephones, &c.*
9. *State distance* (*vertical and horizontal*) *of any portion of the building affected by the lightning from the nearest point of the conductor.*
   (*If stones &c. were displaced, state to what distance.*)
10. *State materials of roof coverings, and position of gutters and down-pipes. Was the conductor in contact with any other metal?*
11. *Were there any metal cresting, weathercocks, finials, or flagstaffs? If so, state distance from and height above conductor.*
12. *If the conductor was struck, state whether the damaged portions can be obtained for examination.*

These questions were issued at once to observers, in order that they should have them readily available when opportunity arose for using them.

To enlist the co-operation of persons competent to aid the Committee by the provision of material for the inquiry, 5,000 copies of the following Memorandum were distributed through the medium of the respective institutions to members of the Royal Institute of British Architects, the Surveyors' Institution, and the Royal Meteorological Society:—

Having regard to the risk of damage by lightning to which our most valuable and historical buildings and monuments are liable, and against which existing systems of protection do not appear to provide sufficient safeguards, the above Committee has been appointed for the purpose of obtaining trustworthy information on future disasters from lightning, with a view to improving, if possible, the means of protection.

In pursuance of this inquiry the Committee seek the co-operation of competent observers in all parts of Great Britain, in order to obtain accurate details, noted on the spot, of the effect of lightning strokes on buildings, whether fitted with lightning rods or not, and as full information as possible on the various matters indicated in the Schedule of Questions prepared for the guidance of observers.

Persons willing to assist the Committee by acting as observers are requested to be good enough to sign and detach the form below and forward it to "The Secretary, Lightning Research Committee, R.I.B.A., 9 Conduit Street, W.," who will at once supply them with copies of the Schedule above mentioned.

To the Secretary, Lightning Research Committee.

The undersigned is willing to act as observer for the District of .....

in the County of .....

Name .....

Address .....

A notice setting forth the existence and requirements of the Committee was issued to the Press, and appeared in all the technical journals interested, and in more than a hundred representative newspapers in London and the provinces.

An immediate response to the Committee's appeal for observers was received from 225 persons, distributed throughout the United Kingdom as follows:—

Buckinghamshire	3	Herefordshire	2	Sussex	11
Berkshire	2	Isle of Wight	2	Surrey	11
Cambridgeshire	3	Ireland	5	Suffolk	5
Cornwall	7	Kent	15	Scotland	12
Cheshire	10	London	22	Staffordshire	6
Derbyshire	2	Lancashire	12	Somersetshire	4
Durham	6	Lincolnshire	3	Shropshire	2
Devon	7	Middlesex	6	Wales	14
Dorsetshire	2	Northamptonshire	3	Warwickshire	5
Essex	6	Northumberland	4	Worcestershire	2
Gloucestershire	7	Norfolk	4	Westmorland	1
Hertfordshire	1	Nottinghamshire	1	Yorkshire	14
Hampshire	4	Rutland	1		

By the kind assistance of the Secretary of the Institution of Electrical Engineers copies of the Committee's Memorandum and Schedule of Questions were sent to some four hundred members of that institution residing in the Colonies and India and in foreign countries. As a result some interesting records were received.

Through the influence of Mr. J. Gavey, C.B., Engineer-in-Chief to the General Post Office, the various District Engineers of the Post Office were enlisted as observers. The Committee desire to acknowledge their special indebtedness to these observers for a number of admirable records of occurrences which have been found of much value in their investigations.

The War Office, the Home Office, the Trinity House Corporation, and the United States Department of Agriculture also signified their intention of furnishing the Committee with particulars of damage caused by lightning to buildings under their control.

The services of a Press-cutting Agency were engaged to supply the Committee with current newspaper notices of buildings that had suffered from lightning stroke in thunderstorms. Between four and five hundred such notices reached the Committee during the years 1901–4; and in neighbourhoods not represented by the official observers application was

immediately made for particulars to the owners or occupiers of the buildings struck, or to members of the Royal Institute of British Architects or of the Surveyors' Institution residing in the vicinity.

The Committee take this opportunity of tendering their grateful acknowledgments for the valuable service so freely rendered by observers in the course of this inquiry. Many of the reports involved the expenditure of much time and labour, and often pecuniary outlay as well. The Committee had intimated their willingness to defray travelling and other necessary expenses; but in very few cases were they called upon to do so.

The heavy thunderstorms of 1901 were fruitful in cases for the Committee's inquiry. Records were received of over sixty buildings struck and damaged, fourteen of them being provided with some form of lightning conductor.

After an examination of the first year's reports the Committee realised that there was a danger of obtaining too great a mass of material and becoming overloaded by it. It was felt that a few complete records of important cases would be better than a multiplicity of observations which would be useful only for statistical purposes. They therefore decided to confine their future investigations to protected buildings only.

In view of the fact that the presence of metal in a building constitutes one of the chief difficulties in arranging for its protection, the Committee were especially desirous of getting more exact information than the earlier reports afforded as to the position of all metal-work in the buildings reported on. Their requirements in this respect were embodied in a memorandum kindly drawn up for the Committee by Sir Oliver Lodge and issued in printed form to observers. The following were the additional points observers were then requested to attend to in making their reports:—

"1. Any signs or indications of where the flash appears to have first struck, and an account of the damage done.

"2. A specification and drawing of the metal-work of the building, paying special attention to metal of every kind which comes anywhere in the neighbourhood of the conductor, whether roof guttering, lead covering, rain-water spouts, sewer ventilators, telephone wires, bell-wires, gas-pipes, ornamental railings, &c., &c., carefully ascertaining whether any of these were either purposely or accidentally connected with the lightning conductor, and, if not, what their nearest distance was from it.

"In the drawing, all metals may be indicated in *red*, no matter of what kind they may be; the hypothetical path of the lightning, as appears to the observer most probable, may be sketched in *blue*, remembering that bifurcation of path is not unlikely. Places of damage may be indicated by a blue swelling or patch, the size of the patch giving a rough idea of the relative damage, and an arrow being employed, when necessary, to call attention to any small patches liable to be overlooked. The patches may be numbered, and the nature of the damage at each place stated in the description. Any place where fire broke out is to be specially attended to.

"3. The nature and condition of the conductor, especially with reference to its continuity, its earth, and its elevation; also how fixed, and, if carried horizontally, its length as compared with the vertical height of its terminal above the ground; also note whether it made any sharp curves or loops round projections of the building, or took an indirect course. Cases of damage where there have been more than one or several conductors are specially important.

"In the case of church steeples the wind vane should receive special attention, and the mode in which its rod terminates in the steeple should be ascertained.

"In the case of chimneys, any internal metal flue should be carefully specified. Likewise any indication that the flash took the column of hot air in preference to the conductor should

be recorded; also whether the conductor was bent or curved over the mouth of the chimney or not.

"In any case of importance the earth of the conductor should be specially examined, being, if possible, dug down to for this purpose; and a complete specification of the nature of the earth, the nature of the soil, and of any metal ramifications as well as of moisture in its neighbourhood, should be made.

"Any signs that the discharge has entered the earth should be recorded; and if the conductor is at any point damaged or otherwise affected, this should be specified, and, when interesting, a sample of the damaged portion should be sent. If the conductor has recently been examined and tested, or otherwise reported on, the fact should be stated."

The Committee, taking into account the greater frequency and severity of thunderstorms on the Continent as compared with the British Isles, and the wider experience abroad of the effects of lightning on buildings, have considered it advisable to make themselves acquainted with the systems of protection in general adoption in various parts of Europe. To this end they have been in correspondence with competent authorities abroad, and have been favoured with details of the methods advised and adopted for the safety of buildings in France, Holland, Germany, and Austria-Hungary. These communications have been translated, and the more material of them are set out either at length or in summary in Appendix B. In this connection the Committee desire to acknowledge their indebtedness to the distinguished *savant* who presides over the Royal Joseph Polytechnic University at Buda-Pesth, to whose instrumentality they owe Professor von Hoór's valuable notes detailing the precautions against lightning now coming into use in Hungary, the method of their installation, and their efficacy as shown by experience [see Appendix B]. Dr. van Gulik's recently published Report to the Dutch Academy of Science on Protection of Buildings from Lightning has also been summarised [see Appendix B].

As far as the Committee are able to judge from the newspaper reports which have reached them, the number of reported cases of buildings damaged by lightning in Great Britain during the three years 1901–1904 amounted to over five hundred. Altogether the Committee have had before them detailed reports from their observers of the damage done in 115 cases. Seventy-five cases related to buildings which were without any form of protection. The remaining forty were provided with what had been considered by those responsible for the buildings as sufficient safeguards in the way of lightning rods. While taking due account of the lessons to be learnt from the action of the lightning on unprotected buildings which have been injured, the Committee have deemed it unnecessary for the purposes of this Report to go into the details of these cases. A selection, however, has been made from the reports of "protected" cases, and these will be found summarised and put into tabular form in Appendix A, with observations in some instances of the conditions which appear to the Committee to have contributed to the failure of the means of protection provided.

OBSERVATIONS AND SUGGESTIONS.

It has been pointed out by Sir Oliver Lodge that lightning discharges are of two distinct characters, which he has named the A flash and the B flash respectively. The A flash is of the simple type which arises when an electrically charged cloud approaches the surface of the earth without an intermediate cloud intervening, and under these conditions the ordinary type of lightning conductor acts in two ways: first, by silent discharge; and secondly, by absorbing

the energy of a disruptive discharge. In the second type, B, where another cloud intervenes between the cloud carrying the primary charge and the earth, the two clouds practically form a condenser; and when a discharge from the first takes place into the second the free charge on the earth side of the lower cloud is suddenly relieved, and the disruptive discharge from the latter to the earth takes such an erratic course *that no series of lightning conductors of the hitherto recognised type suffice to protect the building.*

On the 28th May last an interesting demonstration of the action of A and B flashes respectively was given by Sir Oliver Lodge before members of the Committee and others interested in these researches. A thin sheet of metal mounted on non-conducting standards represented the cloud, which was charged at will from a Leyden jar. The "cloud" was so arranged that the model lightning conductors could have their points brought nearer to or further from its under-surface by shifting their positions on the table. Conductors of copper, iron, and wet string were experimented with. The disruptive discharge to the copper proved to be by far the loudest and most intense of the three. The iron took the flash with less noise, the wet string with hardly any; yet when the discharge passed through it the other and apparently better conductors were not affected. The experiments tended to demonstrate that iron is in many situations a very useful material for lightning rods, as the effective energy of a flash of lightning is rapidly dissipated in iron. This metal, however, unfortunately oxidises rapidly in towns and smoky districts, and the use of copper as a material for a lightning rod is still recommended for main conductors in relatively inaccessible positions, though iron is electrically preferable.

A consideration of the descriptions of recent foreign practice given in Appendix B, and of the cases which appear in the summary of damage [Appendix A], justifies the following general observations.

It is probable that with few exceptions buildings in this country are not in reality efficiently protected against the effects of a B flash, although in many cases the lightning conductors may be said to have at least partially fulfilled their purpose by carrying off the more violent portion of a discharge, and that without them greater damage would have occurred in many of the cases reported.

Some of these observations throw a very interesting light on the effects due to the oscillatory character of lightning discharges. For instance, a discharge takes place over a lightning rod which may be in contact with, or approach closely to, the metallic portions of a roof. Powerful electrical oscillations are set up in the latter conductors, and dangerously high electrical pressure may be generated on the distant ends of these conductors. If at these points they were connected to earth the pressure would be relieved, and the discharge harmlessly dissipated. Without this safe path the discharge may break away into the down pipes, or may pierce the roof to reach internal conductors. Cases which appear to indicate successive or simultaneous flashes may be due to a single flash setting up these oscillations.

In some cases the damage done to a building by an A flash is not necessarily due to the primary discharge. A lateral discharge occasionally occurs, which frequently causes minor, though in some cases serious, damage owing to falling materials.

Many of the reports of damage to unprotected buildings show that the lightning discharge followed the path of wire ropes, metallic pipes, and other conductors, and that the damage to the structure occurred at the breaks in continuity at the upper and lower terminals respectively.

It may be considered that a lightning conductor of the ordinary type, if properly constructed, affords an undefined area of protection against A flashes; but it cannot be said to have any protective area against B flashes.

Absolute protection of the whole of a building could only be assured by enclosing the structure in a system of wirework - a contrivance, in fact, of the nature of a birdcage. This should be well connected at various points to earth, as nearly all buildings have gas and water pipes and other metallic conductors in their interiors which are likewise earthed. For structures intended for the manufacture or storage of gunpowder and other explosives the adoption of this birdcage protection would be justified on the score alone of public safety. Architectural considerations prevent the adoption of such a method in its entirety for ordinary buildings: there is no doubt, however, that practically perfect protection may be assured by a judicious modification of the existing practice of erecting single lightning rods, especially in the case of extensive and lofty buildings that project well above surrounding structures, or that stand isolated in the open country.

It is obvious that the extent to which the building should be protected, and the expense to be incurred in this protection, must bear some definite relation to the importance or cost of the building itself. In cases where protection is considered desirable, but heavy expense is not justified, two or more lightning rods might be erected in the ordinary manner, these being connected by a horizontal conductor, and the metal portions of the roof and the rain-water down pipes should be metallically connected and well earthed.

Tall chimney shafts are not efficiently protected against a B flash by an ordinary single lightning rod, as a hot column of smoke issuing from a chimney conducts as well as or even better than a rod. A circular band should surround the top of the shaft; four or more conductors should be raised above the latter in the form of a coronal, or the Continental practice of joining the elevation rods together, so as to form an arch over the chimney, may be employed with advantage. One or, preferably, two lightning rods should extend from this circular band to the earth in the manner described below.

As most buildings contain systems of gas and water pipes, a good earth for the lightning conductors is highly desirable. In the case of a stove inside a building with a metallic stove-pipe carried outside, the stove should be earthed, and a wire be led from the pipe to earth outside, or to the nearest conductor.

The various cases noted by the Committee show that, while even single conductors tend to diminish the damage done to buildings by lightning, no reliance can be placed on an area of protection. Judging by the latest foreign practice Continental experience appears to be confirmatory of this view (see HOLLAND, HUNGARY, and GERMANY, Appendix B). In churches and other buildings with spires and towers the lower projections should also be protected, even if forming part of the salient features of the building.

No cases of damage to modern steel frame structures have come under the notice of the Committee. The ordinary method of construction, however, in this country does not provide full protection. In many cases the steel columns stand on stone foundations, and the metal is not carried deep enough for effective earthing. The metal columns ought to be earthed at the time of construction.

In the opinion of the Committee the methods advocated in the Report of the Lightning Rod Conference still hold good, provided arrangements are made to keep the earth permanently moist. The Committee therefore deem it convenient to print here the Rules issued by the Lightning Rod Conference in 1882, supplementing them with observations and suggestions of their own based on the results of their recent researches.

RULES FOR THE ERECTION OF LIGHTNING CONDUCTORS, AS ISSUED BY THE LIGHTNING ROD CONFERENCE IN 1882; WITH OBSERVATIONS THEREON BY THE LIGHTNING RESEARCH COMMITTEE, 1905.

Lightning Rod Rules, 1882.	Lightning Research Committee's Observations, 1905.
Points.—The point of the upper terminal should not be sharp, not sharper than a cone of which the height is equal to the radius of its base. But a foot lower down a copper ring should be screwed and soldered on to the upper terminal, in which ring should be fixed three or four sharp copper points, each about 6 inches long. It is desirable that these points be so platinised, gilded, or nickel-plated as to resist oxidation.	It is not necessary to incur the expense of platinising, gilding, or electroplating. It is desirable to have three or more points beside the upper terminal, which can also be pointed; these points must not be attached by screwing alone, and the rod should be solid and not tubular.
Upper Terminals.—The number of conductors or points to be specified will depend upon the size of the building, the material of which it is constructed, and the comparative height of the several parts. No general rule can be given for this; but the architect must be guided by the directions given. He must, however, bear in mind that even ordinary chimney stacks, when exposed, should be protected by short terminals connected to the nearest rod, inasmuch as accidents often occur owing to the good conducting power of the heated air and soot in the chimney.	This is dealt with below in suggestion 3 [p. 417.]
Insulators.—The rod is not to be kept from the building by glass or other insulators, but attached to it by metal fastenings.	This regulation stands.
Fixing.—Rods should preferentially be taken down the side of the building which is most exposed to rain. They should be held firmly, but the holdfast should not be driven in so tightly as to pinch the rod, or prevent the contraction and expansion produced by changes of temperature.	In most cases it would be advantageous to support the rods by holdfasts (which should be of the same metal as the conductor) in such a manner as to avoid all sharp angles. The vertical rods should be carried a certain distance away from the wall to prevent dirt accumulating, and also to do away with the necessity of their being run round projecting masonry or brickwork.
Factory Chimneys.—These should have a copper band round the top, and stout, sharp, copper points, each about one foot long, at intervals of two or three feet throughout the circumference, and the rod should be connected with all bands and metallic masses in or near the chimney. Oxidation of the points must be carefully guarded against.	As an alternative the rods above the band might with advantage be curved into an arch provided with three or four points. It is preferable that there should be two lightning rods from the band carried down to earth in the manner previously described. Oxidation of the points does not matter.

Lightning Rod Rules, 1882—*continued.*	Lightning Research Committee's Observations, 1905—*continued.*
Ornamental Ironwork.—All vanes, finials, ridge ironwork, &c., should be connected with the conductor, and it is not absolutely necessary to use any other point than that afforded by such ornamental ironwork, provided the connection be perfect and the mass of ironwork considerable. As, however, there is risk of derangement through repairs, it is safer to have an independent upper terminal.	Such ironwork should be connected as indicated below in suggestion 3. In the case of a long line of metal ridging a single main vertical rod is not sufficient, but each end of the ridging should be directly connected to earth by a rod. Where the ridge is non-metallic a horizontal conductor (which need not be of large sectional area) should be run at a short distance above the ridge and be similarly connected to earth.
Material for Rod.—Copper, weighing not less than 6 ounces per foot run, and the conductivity of which is not less than 90 per cent. of that of pure copper, either in the form of tape or rope of stout wires—no individual wire being less than No. 12 B.W.G. Iron may be used, but should not weigh less than 2½ lb. per foot run.	The dimensions given still hold good for main conductors. Subsidiary conductors for connecting metal ridging &c. to earth may with advantage be of iron and of a smaller gauge, such as No. 4 S.W.G. Galvanised Iron. The conductivity of the copper used is absolutely unimportant, except that high conductivity increases the surges and side flashes, and therefore is positively objectionable. It is for that reason that iron is so much better.
Joints.—Although electricity of high tension will jump across bad joints, they diminish the efficacy of the conductor; therefore every joint, besides being well cleaned, screwed, scarfed, or riveted, should be thoroughly soldered.	Joints should be held together mechanically as well as connected electrically, and should be protected from the action of the air, especially in cities.
Protection.—Copper rods to the height of 10 feet above the ground should be protected from injury and theft by being enclosed in an iron pipe reaching some distance into the ground.	
Painting.—Iron rods, whether galvanised or not, should be painted; copper ones may be painted or not according to architectural requirements.	
Curvature.—The rod should not be bent abruptly round sharp corners. In no case should the length of the rod between two points be more than half as long again as the straight line joining them. Where a string course or other projecting stone work will admit of it, the rod may be carried straight through, instead of round the projection. In such a case the hole should be large enough to allow the conductor to pass freely, and allow for expansion, &c.	The straighter the run the better. Although in some cases it may be necessary to take the rod through the projection, it is better to run outside, keeping it away from the structure by means of holdfasts, as described above.

Lightning Rod Rules, 1882 *continued.*	Lightning Research Committee's Observations, 1905 *continued.*
Extensive Masses of Metal.—As far as practicable it is desirable that the conductor be connected to extensive masses of metal, such as hot-water pipes, &c., both internal and external; but it should be kept away from all soft metal pipes, and from internal gas-pipes of every kind. Church bells inside well-protected spires need not be connected.	It is advisable to connect church bells and turret clocks with the conductors.
Earth Connection.—It is essential that the lower extremity of the conductor be buried in permanently damp soil; hence proximity to rain-water pipes, and to drains, is desirable. It is a very good plan to make the conductor bifurcate close below the surface of the ground, and adopt two of the following methods for securing the escape of the lightning into the earth. A strip of copper tape may be led from the bottom of the rod to the nearest gas or water *main*—not merely to a lead pipe—and be soldered to it; or a tape may be soldered to a sheet of copper 3 feet by 3 feet and $\frac{1}{16}$ inch thick, buried in permanently wet earth, and surrounded by cinders or coke; or many yards of the tape may be laid in a trench filled with coke, taking care that the surfaces of copper are, as in the previous cases, not less than 18 square feet. Where iron is used for the rod, a galvanised iron plate of similar dimensions should be employed.	The use of cinders or coke appears to be questionable owing to the chemical or electrolytic effect on copper or iron. Charcoal or pulverised carbon (such as ends of arc-light rods) is better. A tubular earth consisting of a perforated steel spike driven tightly into moist ground and lengthened up to the surface, the conductor reaching to the bottom and being packed with granulated charcoal, gives as much effective area as a plate of larger surface, and can easily be kept moist by connecting it to the nearest rain-water pipe. The resistance of a tubular earth on this plan should be very low and practically constant.
Inspection.—Before giving his final certificate the architect should have the conductor satisfactorily examined and tested by a qualified person, as injury to it often occurs up to the latest period of the works from accidental causes, and often from the carelessness of workmen.	Inspection may be considered under two heads:— *A.* The conductor itself. *B.* The earth connection. *A.* Joints in a series of conductors should be as few as possible. As a rule they should only be necessary where the vertical and horizontal conductors are connected, and the main conductors themselves should always be continuous and without artificial joints. Connections between the vertical and horizontal conductors should always be in places readily accessible for inspection, Visible continuity suffices for the remainder of circuit. The electrical testing of the whole circuit is difficult, and needless. *B.* The electrical testing of the earth can in simple cases be readily effected. In complex cases, where conductors are very numerous, tests can be effected by the provision of test clamps of a suitable design.

Lightning Rod Rules, 1882 — *continued.*

Collieries. — Undoubted evidence exists of the explosion of fire-damp in collieries through sparks from atmospheric electricity being led into the mine by the wire ropes of the shaft and the iron rails of the galleries. Hence the headgear of all shafts should be protected by proper lightning conductors.

The investigations of the Committee warrant them in putting forward the following practical suggestions:—

1. Two main lightning rods, one on each side, should be provided, extending from the top of each tower, spire, or high chimney stack by the most direct course to earth.
2. Horizontal conductors should connect all the vertical rods (*a*) along the ridge, or any other suitable position on the roof; (*b*) at or near the ground line.
3. The upper horizontal conductor should be fitted with aigrettes or points at intervals of 20 or 30 feet.
4. Short vertical rods should be erected along minor pinnacles and connected with the upper horizontal conductor.
5. All roof metals, such as finials, ridging, rain-water and ventilating pipes, metal cowls, lead flashing, gutters, &c., should be connected to the horizontal conductors.
6. All large masses of metal in the building should be connected to earth either directly or by means of the lower horizontal conductor.
7. Where roofs are partially or wholly metal-lined they should be connected to earth by means of vertical rods at several points.
8. Gas pipes should be kept as far away as possible from the positions occupied by lightning conductors, and as an additional protection the service mains to the gas meter should be metallically connected with house services leading from the meter.

JOHN SLATER, *Chairman.*
E. ROBERT FESTING.
OLIVER LODGE.
J. GAVEY.
W. N. SHAW.
A. R. STENNING.
ARTHUR VERNON.
KILLINGWORTH HEDGES, *Hon. Secretary.*
G. NORTHOVER, *Secretary.*

10*th April*, 1905.

APPENDIX A.—Analysis of Selected Reports of

No.	Description of Building	Effect of Discharge on Building	Probable Path of Discharge
1	Dalston: German Lutheran Church.—Spire about 140 ft. high; nave, 80 ft. long and 40 ft. high *Reported by* Messrs. George Legg and Alfred Hands	Fire, through ignition of gas at meter. Organ destroyed, and timbers of organ loft fired	From vane *viâ* conductor, rain-water pipe, lead flashing, and gas-piping to meter; thence to earth
2	Truro: Kea Church.—Wooden spire (88 ft. high) covered with copper *Reported by* Messrs. J. C. Daubuz and G. H. Fellowes Prynne	Tiling damaged; lead flashings turned back; wall considerably shaken and face stones fractured	Divided; part going by conductor and part by alternative path formed by copper covering of spire, iron pipe, &c., from which it sparked through parapet wall to lead flashing
3	Stradbroke, nr. Eye: Church.—Square tower with lead roof, flagstaff, and pinnacles *Reported by* Messrs. Alfred Hands and William Clutten	Flagstaff shattered; pinnacle badly damaged and had to be rebuilt; hole pierced in wall; door to turret thrown off	Passed from flagstaff along lead roof to door of turret, thence through wall to conductor
15	Portsea: Workhouse. 2-storied block of buildings *Reported by* Mr. George Cowan	Chimney and brickwork damaged; roof perforated; casing of electric-light wires splintered and wires fused	From chimney through roof and ceiling, along iron picture rods to electric-light wires
25	Darwen: Alexandra Hotel.—Irregularly built *Reported by* Mr. F. G. Haworth, M.B., F. R. Met. Soc.	Chimney broken; grate displaced and marble fireplace broken down	Down the interior of the chimney itself
28	Walsall: Shire Oak Brewery. Chimney 70 ft. high *Reported by* Mr. G. H. Boulter.	Bricks displaced at top of chimney, and earth dislodged at bottom of conductor	Struck chimney opposite conductor, and then passed to conductor
30	Hampstead, Golder's Green: Convalescent Home, formerly private residence *Reported by* Mr. Walter Hall	Small hole made in apex of gable, casement of window damaged; plastering damaged and looking-glass smashed	Uncertain
38	Woolwich: No. 12 Magazine. Copper roof *Communicated by* H.M. Inspector of Submarine Defences.	Uprights to fence or outer gate damaged	Struck fence; post split and broken
41	Leadburn: Signal Cabin.—Brick and wood *Reported by* Mr. James Wilson, and further by Mr. A. Clements, Superintendent of Telegraphs, N. Brit. Railway	Telegraph pole struck; train signalling instrument damaged; woodwork set on fire	From pole, along wires, to cabin
54	Stoerhead Lighthouse.—Metal roof and iron railing around lighthouse *Reported by* Mr. J. M. Irvine, Engineer	Wall damaged, bedstead scorched; gutta-percha wires of telephone circuit burned; woodwork set fire to	Part at least took path by speaking tube, telephone wires, and also by bedstead to wires; thence to earth at pole

Buildings Struck, with Observations by the Committee.

Character of Conductor	Conditions conducing to Discharge through Building: Insufficient Number of Conductors	Conditions conducing to Discharge through Building: Quality of Earth Connection	Conditions conducing to Discharge through Building: Alternative Paths of Discharge (unearthed)	Remarks
Woven copper band (Spratt's), 3 oz. to the foot	—	Bad; only a few inches of conductor passed into gulley	Rain-water pipe, lead flashing. Rain-water pipe and gas-pipes not earthed or connected to conductor	Bad earth; neither lead flashing nor water pipes connected to earth though in close proximity to conductor; the lightning rod itself carried too close to the gas pipes; the gas meter not bridged over by a conductor joining the inlet and outlet pipes
Copper tape 1¼ in. by ⅛ in.	—	Good earth	Copper sheathing of spire, rain-water pipe, and copper wire which passed over conductor and near pipe	The rain water down pipes should have been connected with the roof metals, *i.e.* to the copper roof and lead flashings, and also to earth. This would have prevented the side flash and consequent damage
Copper rope ⅜ in. dia.	Flagstaff being highest point should also have been protected	Very bad earth; rope merely knotted and passed through stone 18 in. below surface. Resistance to earth very high	—	Earth bad. The failure to provide a branch conductor from the flagstaff to the main conductor, and the omission to earth the lead flashing, real cause of damage
No conductor in part of building damaged	—	—	—	Insufficient number of conductors to protect the whole range of buildings, and metal projections on roof not connected to earth
Copper rod (good quality) ½ in. diameter	Formerly conductors on all chimneys; now only three	Character not stated	—	Insufficient number of conductors to protect entire building; of the seven chimneys, all of the same height, only three protected; the nearest conductor 41 ft. from the point struck. This is probably a good illustration of the B flash. At about the same time a horse was killed in a field outside the town
Copper tape and rod carried 4 ft. above chimney	—	—	—	Building occupying the highest ground in the neighbourhood. Illustrates fact that lightning conductors on a shaft should terminate at the upper extremity in manner recommended by Committee
Copper rope ½ in. and ⅜ in. diameter, and rod ⅜ in. Three points	Only one finial point protected; three without conductors	Character not stated	—	All the finials should have been connected by subsidiary conductors to earth
—	—	—	—	Magazine well protected against lightning discharges; the damaged post so far from magazine that no protection afforded by lightning rods. Probably a B flash
Cabin not protected	—	—	—	Lightning protectors provided on all telegraph instruments. The one in question did not act efficiently
Copper rod ¾ in. or ⅝ in. diameter	—	Earth not good. Resistance from ground line 29 ohms	Iron railings; speaking-tube and telephone wires	An isolated building on an eminence. The copper speaking-tube and the iron railing around the lighthouse should have been connected to independent earths

APPENDIX A.—Analysis of Selected Reports of Buildings

No.	Description of Building	Effect of Discharge on Building	Probable Path of Discharge
56	Devaar Lighthouse. Iron lantern frame; copper dome, 130 ft. high; dwelling-houses 30 ft. from tower; lead roof and lead down pipes leading to enclosed cisterns or tanks *Reported by* Mr. C. Dick Peddie	Hole pierced in lead whistle-pipe; whistle and pipe fused, dwelling-houses near damaged; tank-covers weighing 28 lb. displaced 3 ft.	From conductor or copper dome by iron frame of lantern to speaking-tube
57	Rochdale: Stricklands Brewery. — Stone building, tall chimney, iron band round base of chimney *Reported by* Mr. H. Frost, Sectional Engineer, P. O. Telegraphs	Chimney cracked 15 ft. above shed abutting on stack; portion of rod above chimney broken off	Uncertain
60	Withernsea: Signal box, wooden cabin *Reported by* Mr. W. G. Cudworth, Engineer N. E. Railway	Window sash and frame of building fired. Block and bell instruments smashed and scattered in all directions	Struck telegraph wires 100 yds. distant, and passed along wires to box; through instruments to earth
62	Blea Moor: Midland Railway line.—A guide post on footpath struck and charge entered wooden casing carrying cables, mounted on short creosoted pillars 12 in. above ballast *Reported by* Mr. W. Langdon	Guide post shivered into fragments. Boxing displaced and split open for a distance of 33 ft.	From guide post, along surface of ground up creosoted pillars and into casing by nail fastening it to support, thence to signal wire and to earth
64	Cambridge: Cavendish Laboratory *Reported by* Mr. W. M. Fawcett, M.A., F.S.A.	Displaced tiles; made hole through sill of dormer and fused gas pipe	Struck brass knob on top of lead-covered angle of roof, passed to lead cheek of dormer and to gas pipe
65	Maidenhead: Church of All Saints. *Reported by* Mr. Arthur Goulding.	Cock on finial of tower knocked off the spindle, breaking some tiles in its fall	Finial rod and cock to copper conductor
66	Mark's Tey, St. Andrew's Church: Tower of oak; wooden spire covered with oak shingles *Reported by* Mr. W. Cressall	Displaced weathercock and disturbed some bricks	Probably struck weathercock, and passed to conductor connected therewith
67	Possingworth House, Cross-in-Hand: Private dwelling *Reported by* Mr. Killingworth Hedges, M. Inst. C.E.	Building struck twice. First case struck and displaced conductor, and also did damage to chimney and slates. Second case destroyed chimney, damaged roof, and part of the divided flash struck statue not provided with rod	First case main charge probably followed rod. Second case the flash ignored the intermediate chimneys, which were all protected by individual rods, and struck the one unprotected point, which was much lower than the chimney-stacks

STRUCK, WITH OBSERVATIONS BY THE COMMITTEE—*continued.*

Character of Conductor	Conditions conducing to Discharge through Building			Remarks
	Insufficient Number of Conductors	Quality of Earth Connection	Alternate Paths of Discharge (unearthed)	
Copper rod $\frac{3}{4}$ in. diameter. Forked finial	—	Two earth plates 20 in. by 10 in. by $1\frac{1}{8}$ in., 6 ft. apart, connected by rod. Soil not of the best	Whistle-pipes formed alternate path	Another case illustrating defects in Nos. 2 and 54; all metallic masses inside and outside the tower should have been interconnected and well earthed in suitable positions. Spires or towers with metallic roofs should be provided with at least two independent conductors, one on each side
Rod with three prongs	—	Character of earth unknown	—	No sufficient data could be obtained to admit of a definite opinion as to cause of damage
—	—	—	—	Somewhat similar case to 41. Lightning entered signal-box along telegraph wires, and the instrument-protector failed to act
—	—	—	—	An interesting case illustrating erratic path chosen by lightning. A passage along the earth, up a wooden post, and into a wooden casing to reach the metallic surface of a lead-covered cable, which it traversed for some distance before it entered the mechanical signal wire. This under ordinary circumstances would appear an impossible route. The charge only reached a good earth when it entered the rails
Copper wire rope $\frac{3}{8}$ in. diameter on tower	Conductor on tower 36 ft. from point struck	Not stated, but the rod had been recently fixed	Brass knob to iron rod and lead cheek of dormer and gas pipe	Illustrates the need for earthing all metallic portions on the roof of a building
Finial rod $\frac{3}{4}$ in. iron 6 ft. above apex of spire; $\frac{1}{2}$ in. wire rope	—	Stated no earth plate	—	The cock formed an imperfect upper terminal to the lightning rod; apart from this the rod acted efficiently
Copper wire rope, $\frac{1}{2}$ in. diameter; single pointed terminal	—	Not stated	—	Beyond displacing weathercock at top, and a few bricks where the rod entered the ground, no damage done; although apparently not efficiently terminated at either end the rod conveyed the charge safely to earth
Copper tape, $1\frac{1}{8}$ in.	Everychimney-stack fitted with a rod. The flash struck the rods on both occasions about 3 feet below the air terminal	Good.	The tape conductor was run indirectly to earth, so that a portion of the charge travelled down the wet roof	These two cases can only be reasonably explained on the supposition that the discharges were of the B type, and this hypothesis is supported by the fact that numerous trees in the neighbourhood were struck. An unusual number of lightning rods were provided, although they were not interconnected. It will be noted that the structure did not suffer any internal damage, so that the rods afforded some measure of protection; and if they had been connected by a horizontal conductor, furnished with more direct earth connection, the damage might possibly not have occurred

APPENDIX A.—Analysis of Selected Reports of Buildings

No.	Description of Building	Effect of Discharge on Building	Probable Path of Discharge
68	St. Pancras' Church, Euston: Spire surmounted by gun-metal cross. Lead roof *Reported by* Mr. Arthur R. Kelly	Gas-pipe fused and gas ignited in church; joints in buried gas-pipe parallel to and 16 ft. from buried end of conductor destroyed; large escapes of gas caused; electric light fuses destroyed	Portion at least passed from steam exhaust pipe, hot-water radiator and supply pipe to open gulley
73	Swanscombe: Church, with oak shingled spire *Reported by* Mr. W. P. Goulding	Fire: portion of church destroyed	Along rod to opening in tower about 5 ft. above ground, thence in iron rods to earth along an unknown channel inside. Wooden staircase first set on fire
74	Aldenham Church, near Watford, Herts.—Timber spire on top of tower. Clock chamber some 20 ft. below lead flat of tower; clock weight exposed through belfry, but below belfry cased in down to floor of church, where there is a pit 6 ft. deep to receive it *Independent reports* by Messrs. Harry G. Assiter and Fred. V. Selfe	Copper weathercock twisted; oak timbers and shingles of spire shattered; wood casing for clock weights, and oily rags at base thereof, ignited	From lead flat of stone tower to tenor bell; thence to clock, and down the steel wire ropes ($\frac{3}{16}$ in. diam.) of clock weight to earth
75	St. Botolph's, Aldgate: Church with tower and spire *Reported by* Mr. Killingworth Hedges, M.Inst. C.E.	Parapet under spire shattered. Finial to which conductor connected disturbed at base	—
76	Kingston: Boys' School.—200 ft. by 50 ft. 60 ft. to ridge of roof *Reported by* Mr. Isaac Slade	Chimney stack damaged. Picture hung with wire scorched	From chimney, probably followed course of iron pipes throughout building
78	Inverness: Post Office.—Standard over-topped mansard roof by 12 ft., and had 15 wires attached to it. Flat tops of mansard roofs covered with sheet lead *Reported by* Mr. J. M. Irvine, Engineer P.O. Telegraphs	Lead on roof damaged. Below roof two discarded gutta-percha covered wires (reaching from ceiling to within a foot of iron hot-water pipes on floor) set fire to, and wood lining of rooms ignited	—
79	Benefield: Church with tower and spire surmounted by a copper cross *Reported by* Mr. Fred V. Selfe	Displacement and bulging of spire, threatening its collapse; supposed to have been caused by lightning. No direct evidence	From copper cross down iron upright supporting cross to cross bars, then through joints of stone work to conductor

STRUCK, WITH OBSERVATIONS BY THE COMMITTEE—*continued.*

Character of Conductor	Conditions conducing to Discharge through Building			Remarks
	Insufficient Number of Conductors	Quality of Earth Connection	Alternative Paths of Discharge (unearthed)	
Copper stranded cable ⅜ in. diameter looped round square base of gun-metal cross on top of spire, then to lead roof and to earth	—	—	Alternative path formed by relief pipe (which protruded above roof) hot water system, and finally to earth *via* gas-pipes	Most interesting and instructive case. The lightning charge evidently struck the rod and set up violent electrical oscillations in the lead roof with which it was in metallic contact at one end. Had suitable earth connections been provided at the distant end of the nave, and had the heating system been also connected to earth, no damage would have occurred. The only outlet to earth for the charge was *via* the gas-pipe; hence the damage
¾ in. solid iron rod in 10 ft. lengths united by plumber's joints; ended 2 ft. above earth on iron gas barrel, but (said to be) not connected	—	Rod ended in an iron tube which entered ground. Earth very bad	—	An imperfect rod with very bad earth. Apparently the charge entered the tower at the lower opening and found its way to earth, setting fire to the staircase in the passage
Copper cable, 1 in. diameter; connected to finial		Not stated	—	An interesting case in which the metallic bell-cord acted as a lightning rod, damage being restricted to the upper and lower extremities only
—	—	—	—	The lightning rod took several sharp angles that may have caused side flash, which reporter thinks passed on to earth *via* the rain-water pipe, which was near but not connected to the rod
Not stated	Insufficient number of conductors	Not stated	Conductor followed side of iron down pipe; distance between not stated	Damage probably due to two causes: first, a single lightning rod of moderate height quite insufficient to afford reasonable protection even against A flashes; and, secondly, the interior pipes for heating and other purposes formed an alternative path which could only be reached by a fracture of some part of the structure
One conductor, $\frac{7}{16}$ in. strand, copper, 12 ft. above roof fastened with galvanised iron staples. Wires at top were untwisted, separated, and sharpened at points; at bottom were soldered to 12-in. iron water-main pipe, after encircling it several times	—	—	—	The damage was probably due to the fact that the lead flats and the iron portions of the building were not connected to earth
Not stated	—	Said to be faulty	From copper cross and upright to cross beams supporting same	A case in which upper portion of spire found to be damaged in a manner which might have occurred had a lightning flash followed the course of the copper cross with its metallic support, then flashed through stonework to the conductor. Indirect evidence only

APPENDIX A.—Analysis of Selected Reports of Buildings

No.	Description of Building	Effect of Discharge on Building	Probable Path of Discharge
80	Welbeck Abbey: Library and chapel.—Rectangular building—copper-covered roof *Reported by* Mr. J. Wallace Stevens	Window sill broken and pieces thrown about; rain-water pipe (sunk in wall) bared	Uncertain, probably from roof to rain-water pipe, then to earth
83	Highgate: St. Michael's Church.—Tower and spire surmounted by stone cross, 145 ft. high *Reported by* Mr. Walter Hall and Mr. Killingworth Hedges	One arm of stone finial cross broken and displaced; ball of cross shattered; falling stones crashed through roof of nave	Struck arm of cross, then probably passed to conductor
85	Derby: Carriage sheds.—Midland railway *Reported by* Mr. W. Langdon	Shed itself unhurt, but discharge struck gas-pipe on roof of carriage and ignited gas	Uncertain
86	Bolton: Ainsworth Mill.—Chimney about 60 ft. high *Reported by* Mr. W. W. Midgley, F. R. Met. Soc.	Chimney demolished. Windows of mill broken; gas-pipe fused and gas ignited. Engine-house destroyed by falling chimney	Not known
88	Bedford: St. Paul's Church.—Tower and spire *Reported by* Mr. W. P. Goulding	Heavy beams inside building slightly displaced, supporting corbels split; main switch of electric light fused. Iron rain-water pipes broken; lead flashings on roof broken and torn away	By conductor from top of spire to lead flat, at bottom of spire, on which conductor lay; then divided, portion finding earth through rain-water pipes &c.
93	Coatbridge, Lanarkshire: Church.—Tower about 80 ft. high, upper half octagonal, carrying eight cone-shaped balusters, one at junction of each angle *Reported by* Mr. W. E. A. Knight	Three balusters damaged and part of conductor rod led round tower fused. Roof damaged by falling stones	Struck balusters, then followed circular part of conductor to loop, then to vertical conductors and to earth
94	Torr Head: Coast Guard Station *Reported by* Mr. T. Patterson, P. O. Engineer	All windows smashed; iron eaves gutter smashed; telephone wires fused	Not certain
97	Canton, Cardiff: St. John's Church.—From top of steeple to ground, about 175 ft. *Reported by* Mr. W. H. Monk, P.O. Telegraph Superintendent	Conductor torn away at about 30 ft. from the trident; electric-light wire fused; plaster damaged in several places; lead on lower roof ripped up; and stone coping torn away where lightning left conductor for the leads	After leaving conductor passed along leads of lower roof to electric-light wire, and thence jumped to heating apparatus
98	East London Waterworks: Chimney of Pumping Station, Sunbury. *Reported by* Mr. W. B. Bryan, M.Inst.C.E., Chief Engineer	Struck upper cornice of campanile, then lower cornice, shattering stonework above and below	Flash followed the hot air escaping from side, then travelled from upper to lower cornice, thence to steel stand-pipe inside chimney

STRUCK, WITH OBSERVATIONS BY THE COMMITTEE—*continued.*

Character of Conductor	Conditions conducing to Discharge through Building			Remarks
	Insufficient Number of Conductors	Quality of Earth Connection	Alternative Paths of Discharge (unearthed)	
Two conductors, copper wire twisted ½ in. diameter	—	Earth connections bad (Details unknown)	—	Damage insignificant, probably due to oscillatory side flash from the copper roof to the rain-water down pipes which were not in metallic connection
Copper rod, ¾ in. diameter	—	Found to be in connection with the electric-light mains		A stroke caused similar damage some years ago
—	—	—	—	One of fourteen railway carriages standing in a light timber shed unprovided with a conductor
Not known, but said not to be in good repair	—	Unknown		The fall of the chimney wrecked the engine-house, and the mass of débris was so great as to prevent further investigation. The flash would appear to have taken a path along the interior of the chimney in preference to that furnished by a faulty lightning rod, for it burst out with destructive violence at the base of the chimney, causing the collapse of the whole
Copper cable ⅝ in. diameter terminated under seat of weathercock. From the base of the spire the conductor was laid on the lead flat		Not stated	Formed by lead roof and rain pipes &c.	A very interesting case. The conductor being in contact with the lead flat violent oscillations were set up which extended the whole length of the roof; no subsidiary conductors being provided, the discharges took all available paths, some inside and some outside the building
Copper rope of seven strands from above balusters to earth. A subsidiary conductor carried around at the base of the balusters and connected to main rod	—	—	—	A conductor on each baluster reaching down to the circular band at the base of the balusters would have prevented all damage
Building itself not protected. Flagstaff which is apart from but close to the building protected by conductor ¼ in. diameter	—	Earth bad; conductor buried in cement	—	Had a good earth been provided for the conductor on the flagpost probably this damage would not have occurred
One conductor; trident at top, and about 12 ft. of iron casing at bottom	—	Bad. Earth plate 1 in. wide, and about a yard long, buried about 10 in. beneath surface in very dry soil	—	The lightning rod very old and worn very thin where it passed through the staples; conductor fused and main charge diverted to the lead flashing of the lower roof. This shows the necessity of running direct to earth and avoiding sharp bends
No special conductor, as the 36-in. steel standpipe connected to several miles of mains came almost to the top of chimney	—	Raining heavily	—	This proves that a flash will follow a column of hot air, and in this case was diverted from the standpipe which formed a perfect conductor to earth

APPENDIX B.

LATEST PRACTICE ABROAD.

Holland.

The following is translated from the Dutch of the very complete and valuable Report made by Dr. D. van Gulik at the request of the Dutch Academy of Science, which has just been published under the title of "Further Inquiries in regard to the Protection of Buildings from Lightning" (Haarlem, 1905) :—

1. Lightning conductors serve to lessen the risk of fire and of serious damage for the buildings protected by them, and to reduce considerably the danger to life for those who inhabit the buildings. Whether the risk of a building being struck by lightning is also lessened by the installation of points or bundles of points is very doubtful. Where, therefore, economy is an object these may be first dispensed with.

2. In protecting buildings from lightning we must bear in mind that, contrary to what we notice in the case of constant electric currents—

(*a*) Lightning shows a great tendency to distribute itself over such conductors as may be present, and in so doing to pay little heed to the electrical resistance of the conductor.

(*b*) That it finds no great difficulty in making its way, often for a considerable distance, through the air or through any other good conducting medium.

(*c*) That it prefers to move, as far as possible, in a straight line, and that, therefore, sharp turns or spiral windings in conductors present hindrances which, in view of the properties mentioned in paragraphs *a* and *b*, readily lead to lateral discharges.

Absolute security is not attainable, or attainable only with great difficulty, and in any case at considerable expense. On the other hand a quite satisfactory degree of protection can be secured by very simple means.

3. The greater the importance attached to the preservation of a building and its contents, the more perfect can the system of conductors be made, and thus a higher coefficient of safety is obtained by increased expenditure.

4. The conductors at present used in Holland secure a fairly high degree of safety in the case of houses with tiled or slated roofs, as they reduce the risk of fire when struck to an average of between one-sixth or one-seventh. Statistics show, however, that the lightning frequently diverges from them, and may even strike the buildings without touching the terminal rods. Moreover, the cost of installation is so great that many people are deterred thereby from having these useful appliances fitted. Certain general improvements and simplifications may, however, be pointed out, by means of which the conductors would, even at a lower cost, better answer the purpose for which they are intended.

5. The *improvements* are in the main as follows :—

(*a*) All salient positions liable to be struck should be provided with terminals in the form of short rods or wires, and the roof should be girt round on all sides by wire conductors. This would take the place of the high terminal rods with their imaginary cone of safety.

(*b*) Several conductors running to the earth should be fitted.

(*c*) The system of conductors should be connected with any extensive metallic mass present in the building, if necessary at more points than one. In the case of gas and water pipes such connection is absolutely necessary.

6. The principal *simplifications* may be summed up thus :—

(*a*) High terminal rods should be abolished, as it is difficult to fix them firmly enough.

(*b*) Copper, which is the material generally used for conductors and earth-connections, should be replaced by iron. This, if well galvanised, will resist atmospheric influences for a very long time, and can, moreover, be easily protected by a coat of paint.

(*c*) The thickness of the conductors should be reduced. In support of this we may adduce the evidence of the ordinary telegraph wire, which is seldom, if ever, found to be melted except at the point where it is struck. Even in providing for extreme cases we should not lose sight of the fact that a wire will do its duty even though it succumbs to the force of the stroke.

(*d*) The metallic constructional portions of the building should be pressed into service as conductors. By this means either the conducting system is extended, with a consequent increase in the margin of safety, or the use of special conductors may be partly dispensed with. This last expedient provides a ready means, in the case of special classes of buildings, of providing quite efficient conductors at a trifling cost. It is not necessary that there should be metallic contact between the metal constructions provided that they overlap one another over an area of 10 square centimetres.

7. In making earth-connections too much importance is often attached to reaching the ground water level, while on the other hand too little care is taken to secure a good connection between the conductor and the uppermost layer of soil. By paying attention to this a considerable saving may in some cases be made in the cost of the earth-contact. In isolated cases where connection with

underground pipes, &c., is possible, no special earth-connection is necessary.

8. When building houses it is desirable that the conductors should always be marked on the plans. This makes their installation easier and reduces the cost. Moreover, it enables architects to exclude from their plans constructions which would tend to increase the risk of fire in the event of the house being struck by lightning.

9. Special precautions are necessary in the case of thatched roofs. These consist mainly in keeping the conductors some distance away from the roof and in making the wire of such thickness that it shall not be destroyed at the point where it is struck by lightning. If this be done, a high degree of safety is attainable even in the case of thatched roofs.

Hungary.

Through the good offices of the Rector of the Royal Joseph Polytechnical University, Budapest, Dr. Moritz von Hoór kindly favoured the Committee with the following remarks concerning the precautions against lightning now coming into use in Hungary, showing the method of their installation, and their efficacy as proved by experience:—

Up to the year 1892, in Hungary as well as in other countries, lightning conductors with collecting points according to the Franklin system were the only ones in use. Here, as elsewhere, the view was universally accepted that absolute security for the efficiency of lightning conductors was afforded by the largest possible cross section of the lightning rod, by a slight change of the collecting apparatus, and by a good earth connection. It was held, therefore, that a conductor had been rightly set up when the collecting point and the earth had been connected by strong copper wires or cables, and care had been taken for a good earth contact.

Experience of such lightning conductors, however, as well as observations systematically taken in England and the English colonies, and in Germany, proved that lightning rods on this principle did not answer their purpose, and in particular that the directions as to the area of protection of the conductor and the relation between height and base of the protected zone were of no practical value and quite baseless.

It was repeatedly observed that there were lateral discharges from the conductor in the direction of the metal parts (badly connected apparently with the earth), that sparks leapt over curves in the conducting apparatus, and in general that buildings and other objects protected by the collecting points suffered damage from lightning, though to a far less extent, as shown by statistics, than objects altogether unprovided with lightning conductors.

It was not until the beginning of the nineties that our views as to the function and the correct installation of lightning conductors became more clear, as a result of the investigations then made into electric oscillations, and of the right appreciation of the self-induction of lightning conductors.

Professor Moritz v. Hoór, following up the work of Hertz and Lodge, was the first in our country to treat this question theoretically and experimentally in a scientific manner on the basis of the new principles, and he was the first here to suggest the abandonment of the conductors with collecting points, and the introduction of contour conductors without collecting points, similar to Faraday's parrot cage.

Leopold Stark, chief engineer of Messrs. Ganz & Co., has since made an exhaustive study of this question, and has worked out various practical plans for cage conductors, with a special view to their application to the protection of agricultural objects peculiarly exposed to risk from lightning (cf. *Villámhárítók különös tekintettel mezögazdasági épületekre*, irta: Stark Lipót gépészmérnök, Budapest, Fövárosi Nyomda, 1903).

For some years now, as a result of these works and of the agitation started by the above-mentioned scientists, cage lightning conductors of this kind have been largely in use with us, both on town buildings and on agricultural objects. They consist, as Sir Oliver Lodge, and, long before him, Faraday, suggested, of barbed wire, or strong iron wire, or sheet iron bands, which, following the contours of the roof and building or other objects, conduct to separate earth connections or to connections joined underground by a circular conducting wire.

The cost of such conductors is with us hardly more than that of the conductors with gilt collecting points and copper conducting wires, and they have been found admirably efficacious, as might have been deduced from theoretical reasoning; so that the military authorities both in Austria and Hungary have had all magazines of explosives protected in this manner.

Special care is taken, in setting up these cage conductors, to avoid the sharp curves arising from a sudden change in the direction of the earth conductors, so as to reduce as far as possible the self-induction of the earth connection.

Importance is likewise attached to good earths, but experience shows that if the cage arrangement is well carried out and the number of cage wires not too scanty, even without a very good earth connection the conductor still works satisfactorily.

At present both the cage and the Franklin collecting point system are in use with us; but of late years, especially for agricultural objects, the cage system is coming more and more in vogue, and probably in a short time all the new conductors will be of this kind.

Germany.

The following is extracted from the Regulations of the Electro-Technical Society of Berlin, issued in 1901:—

1. The lightning receivers should consist of vertical points. The points of towers or gables, edges of the ridge of the roof, tops of chimney stacks, and other high parts of buildings, should be converted into receivers, or be provided with suitable receivers. The conductors should be in metallic connection with the receivers and the earth; they should go round the building, especially in the roof, and if possible on all sides, and then be led from the receivers to the ground by the most direct route, avoiding as much as possible all sharp curves. The earth connections should consist of metallic conductors connected to the lower conductors on the building, and should descend into the ground and extend as far as possible, preferably where the earth is damp.

2. The metallic parts of the building, and masses of metal in and upon it—especially those in contact with the earth and offering large surfaces (such as pipes)—should be connected together as much as possible, and to the conductor also. Special receivers and conductors are rendered unnecessary if these metallic parts of the building comply with the requirements mentioned in paragraphs 1, 4, and 5. Both for perfecting the system and for decreasing cost, the question of utilising the pipes as conductors should be considered when erecting new buildings, making use also as much as possible of all the metallic parts of the building for protective purposes.

3. The protection afforded by a conductor is the greater the more perfectly all the prominent portions of the building are protected by receivers, the larger the number of receivers and conductors, and the more extended the connections to earth. Generally speaking, damage by lightning is diminished if all the metallic parts of buildings of considerable extent are inter-connected, especially if the highest parts are connected to earth, even if these connections are not made specially with a view to protection from lightning.

4. Inter-connected conductors of iron should not have a section of less than fifty square millimetres, unconnected ones not less than a hundred square millimetres. If of copper, half the section is sufficient; zinc must be one and a half, and lead three times the section for iron. Conductors must be securely fixed to resist strong winds.

5. The connections of and to the conductors must be made strong, be of good electrical contact, and with as large a surface as possible. Unwelded and unsoldered connections should have metallic surfaces of contact of not less than ten sq. centimetres.

6. The lightning-conductor system should be repeatedly tested; and when alterations are made in the building, the necessity of alterations in the lightning-conductor system should be considered.

Baurat Findeisen, of Stuttgart, deduces from certain statistics as to strokes by lightning in Würtemberg that there is some doubt as to the efficacy of intercepting rods in attracting and protecting against lightning, and that there is no point in measuring the resistance of lightning conductors, since the high pressure of lightning would overcome even high degrees of resistance. It would be sufficient, he thinks, if all the protecting sheet metal on the roof-ridge and elsewhere were connected with the gutters and rainwater pipes—if the chimney, which is so often struck, were protected by a rope (3 to 4 mm.) of galvanised iron wire, projecting to a height of one-half to one metre above the chimney, and joined as conductor with the protecting metal, and if the water pipes were used as earth connections, they also having a strong wire rope running along them, which, at the lower end, should be untwisted and carried in fan shape about half a metre down into the ground. Four such earth connections at the corners of the building to be protected would suffice. If yet further precautions are desired, galvanised sheet iron might be substituted for this. Lightning conductors of this type have proved their efficiency.

United States and Canada.

The Hon. Secretary to the Committee, Mr. Killingworth Hedges, who visited the United States and Canada in 1902, reported as follows:—

The general opinion was that owing to the very inefficient protection which had been afforded in the past by the contractors who had installed lightning rods on many public and private buildings, it was gradually dropped out of architects' specifications, and at the present time few new buildings are protected at all; they are often struck, but as the insurance policy covers the loss, little notice is taken, although deaths occur either by direct stroke or from chimneys or masonry falling. I was informed that the present conditions were thought to be unsatisfactory, and that architects and engineers generally would like to be advised as to what protection they should adopt. That large amount of damage by fire caused by lightning does take place, is shown by the reports of the Fire Commissioners. The action of lightning when striking those high steel buildings known as sky-scrapers is peculiar, and is worth investigation, as examination does not show in what direction the current flows to earth. In many cases in New York the buildings are insulated from the ground by the fact that the foundation is blasted out of the rock on which the city is built.

Subsequently I went to Canada, and on the day after my arrival in Toronto a severe storm took place, which caused several fires from gas ignition, and a flash struck the tower of the fine City Hall, shattering the roofing and doing considerable damage. No lightning conductor was installed, but from the advice which I gave the City Commissioner, the building will be specially protected.

REPORT OF THE COUNCIL FOR THE OFFICIAL YEAR 1904–1905.

Approved and adopted by the Annual General Meeting, Monday, 1st May 1905.

SINCE the publication of the last Annual Report the Council have held 17 meetings, of which the Council elected in June last have held 14. The following Committees appointed by the Council have met and reported to the Council on the matters referred to them:—Competitions, Prizes and Studentships, Finance, Sessional Papers, Professional Questions, Board of Professional Defence, London Building Acts Amendment.

Obituary. The losses by death have been as follows:—*Fellows*: William Henry Arber, Walter Aston, James Barnet, Francis William Bedford, Thomas Blashill, James William Brooks, Francis Edward Caws, Richard Knill Freeman, Arthur Green, George Fowler Jones, Frank Manoah Kent, Robert Kerr, John Norton, Arthur Edward Perkins, Ellis Herbert Pritchett, William Alfred Royle, George Hurst Stanger, Frederick William Tasker, James Thomson, Frederick S. Waller, John Thomas Wimperis. *Associates*: Charles Bennett Arding, Percy William Barrett, Norman Michael Brown, Charles John Ferguson, Percy Christian Gibbs, Edward Baldwin John Knox, John Mossop, Samuel Joseph Nicholl, Charles Pertwee, Ernest Simm, Henry Ernest Stelfox, Samuel John Thacker, Thomas Edward Thickpenny, Arthur Charles Wissenden. *Hon. Associates*: James Lewis Thomas. *Hon. Corr. Members*: L. C. Pedro D'Avila, Professor Fenger. Obituary notices of some of the above have appeared in the JOURNAL.

Royal Gold Medal. The Royal Gold Medal was awarded last year to M. Auguste Choisy [*Hon. Corr. M.*], of Paris, Inspector General in the Service des Ponts et Chaussées, in recognition of his distinguished merits as a writer on architecture. M. Choisy came to London to receive the Medal in person. The presentation was made on the 20th June.

It has been decided to award the Medal this year to Sir Aston Webb, R.A., in recognition of his eminence as an Architect. His Majesty the King has signified his approval of the nomination.

Membership. The following tabular statement shows the present subscribing membership of the Institute, compared with that at the corresponding periods of the last two years:

Year	Fellows	Associates	Hon. Associates	Total
1903	627	1,117	43	1,787
1904	644	1,142	43	1,829
1905	677	1,182	45	1,904

During the official year since the last Annual General Meeting 57 Fellows have been elected, 65 Associates, 1 Honorary Fellow, and 3 Honorary Associates.

Examinations. The Progressive Examinations were held in June and November 1904. The Preliminary was held in London, Belfast, Birmingham, Bristol, Cardiff, Exeter, Glasgow Leeds, Liverpool, Manchester, Newcastle-on-Tyne, and York; the Intermediate in London. Belfast, Bristol, Glasgow, Leeds, Manchester, and Newcastle-on-Tyne. The Council desire to record their thanks for the valuable services rendered by the Hon. Secretaries and Examination Committees of the various Allied Societies. The Final and Special Examinations were held in London. The results are shown in the following tabulated form:

	Exempted	Examined	Passed	Relegated	Total
Preliminary Examination . .	116	329	243	86	445
Intermediate Examination . .	3	264	139	125	267
Final and Special Examinations .	—	140	65	75	140

The total number of candidates was 852. The number of Probationers now stands at 2,305, and of Students at 582. The Council regret that so large a number of Students remain on the list without proceeding to the Final Examination.

The Council, on the recommendation of the Board of Examiners, have given authority to the Institute of Architects of New South Wales to exempt properly qualified candidates from the Preliminary Examination of the Royal Institute, and as a result seven gentlemen residing in Sydney were duly registered as Probationers in June last.

The first Intermediate Examination held out of the United Kingdom took place last November in Sydney, when three candidates were examined. The Board of Examiners have not yet reported the result of the Examination, the papers having only just come to hand.

The Ashpitel Prize was awarded to Charles Lovett Gill, who passed the Final Examination in November 1904.

The Special Examination for Colonial candidates will be held this year in Canada and Sydney.

The Council desire to thank the Board of Examiners for the continuance of their invaluable services.

The Statutory Examinations, qualifying for Candidature as District Surveyor in London, and for Candidature as Building Surveyor under Local Authorities, were held in London in October. Certificates of competency to act as District Surveyors in London have been granted to Percy John Black, John Moir Kennard [*A.*], and John Todd.

Prizes and Studentships. The Deed of Award of the various Prizes and Studentships was presented to the Institute at a General Meeting on the 23rd January. At the distribution of Prizes on the 6th February, after the Address to Students by the President, there was read a criticism by Mr. A. N. Prentice [*F.*] of the work submitted. An exhibition of the drawings was held from the 24th January to the 4th February in the Gallery of the Alpine Club, and was visited by 1,400 persons. A selection from the Prize Drawings is now being sent the round of the Allied Societies.

Annual Dinner and Social Functions. The Annual Dinner was not held last year. It will take place this year on Friday, the 13th October, in Newcastle, under the auspices of the Northern Architectural Association. An interesting programme for the visit will be arranged, and the Council hope that many members will see their way to attend.

The last of the "At Homes" given by the late President, Sir Aston Webb, R.A., was

held on Saturday, the 18th June. The interesting feature of the occasion was an Exhibition of Architects' Sketches and Water-colour Drawings.

The President has kindly continued the practice inaugurated by his predecessor, and his first "At Home" took place on the 16th January. The Exhibition consisted of works of sculpture executed in connection with architecture.

Registration. The Registration Committee appointed last Session, and constituted as described in the last Annual Report, began their labours too late in the Session for any effective result, as the Council elections in May very considerably changed the *personnel* of the Committee. The new Committee early in the present Session appointed a Sub-Committee which has met monthly, holding morning and afternoon sittings. A Bill for the Enrolment of Qualified Architects prepared by the Sub-Committee with the assistance of Counsel has been considered by the General Registration Committee, who have referred it back to the Sub-Committee for emendation. The Registration Committee hope to submit it for the adoption of the Institute at an early General Meeting.

Education. It was mentioned in last year's Annual Report that the Council had under their consideration the proposals of a Committee on Architectural Education consisting of members and non-members of the Institute which they had appointed. The Council have approved of these proposals, and have established a Board of Architectural Education with a mandate to prepare a scheme for the coordination of Architectural Education throughout the country, and to secure, if possible, its adoption in the various schools. Of this Committee Sir Aston Webb, R.A., is Chairman, Mr. Basil Champneys Vice-Chairman, Mr. John Slater and Mr. Reginald Blomfield, A.R.A., Hon. Secretaries. It consists of "Members," who are all architects, and "Advisory Members," who are representatives appointed by Universities and other educational bodies. The first portion of the task has been accomplished by the Board, which is now laying the scheme before the teaching centres of the country with a view to its adoption. The scheme, admirably put before the Institute in a Sessional Paper read by Mr. Reginald Blomfield on the 20th February, has been printed in the JOURNAL.

Public Works and Municipal Officials. A Memorial setting forth the disadvantages to the community of Municipal officials being entrusted with the design and execution of architectural works was sent in November last to all the County Councils, Municipal Councils, and District Councils of the United Kingdom. The Council, although aware of the improbability of the principles stated in the Memorial being at once adopted by municipal bodies, yet entertain the hope that the prominence with which this important question was brought before them will have considerable influence for good. A reduced facsimile of the Memorial signed by the Council and by the Presidents of all the Allied Societies was published in the JOURNAL of the 10th December.

The London Building Act. The Council have appointed a Committee, consisting of a Sub-Committee of the Practice Committee, the Chairman and Hon. Secretary of the Science Committee, the Hon. Secretaries of the Art Committee, and Mr. Lacy W. Ridge, to consider and report to them on all matters connected with the London Buildings Acts (Amendment) Bill now being promoted in Parliament by the London County Council. The Council, adopting the recommendation of the Committee, decided to oppose the Bill in Parliament. A petition was deposited, and Mr. Pembroke Stevens, K.C., and Mr. H. Courthorpe Munroe retained as Counsel. The Committee drafted a detailed criticism of the Bill as instruction to Counsel when the Bill should reach the Committee stage in Parliament. Prior to Second Reading, however, the L.C.C. dropped the greater portion of the Bill, retaining only the clauses

relating to the Prevention of Fire. The new Bill when received will have the Committee's attention. The most hearty thanks of the Institute are due to the members of this Committee for the self-sacrificing way in which they have carried on their arduous and continuous labours.

Easement of Light Bill. The judgment of the House of Lords in the case of *Colls* v. *The Home and Colonial Stores* induced the Joint Committee of the Institute and the Surveyors' Institution to drop Part III. of the Easement of Light Bill which dealt with this subject, and also the only other clause relating to a change in the law, *i.e.* Part V., headed "Right to Light passing over Streets," and the Councils of the two bodies have approved the omission. The Bill as now about to be introduced into Parliament by Mr. J. Fletcher Moulton, K.C., M.P., is a Bill of Procedure, providing a simple machinery for the settlement of disputes on the lines of that already organised with regard to party-wall cases.

Board of Professional Defence. Until last Session the Council had strictly observed the principle of limiting their advice on professional matters to such cases as were not of a purely legal character. Having, however, considered that it might be advantageous to members if this limitation were modified, the Council have constituted a Board of Professional Defence to consider cases of broad professional interest, to give advice, and, subject to the approval of the Council, to take Counsel's opinion on any point, and if necessary and desirable to support the architect's case, financially or otherwise, in a court of law. Up to the present time the cases that have come before the Board have not been, in their opinion, of such a nature as to warrant positive action on their part.

Chartered Societies' Protection Bill. A Bill making it penal for any unauthorised person to use the title or distinctive letters of a chartered institution was introduced last Session in Parliament, but dropped. It is again before the House this Session. Nine chartered bodies, including the Royal Institute, are promoting the Bill.

Traffic Commission. In accordance with the recommendation of the Art Committee mentioned in their last Annual Report, the Council have been in communication with the Royal Commission on London Traffic, urging that the views of expert architects be considered on the laying-out of street improvements. It being too late for evidence to be taken, the Commission have promised that the Council's request shall be borne in mind in the event of any definite scheme for the improvement of London streets being contemplated.

L.C.C. By-laws with respect to Drains. It was mentioned in the last Annual Report that the views of the Institute regarding the L.C.C. By-laws as to the deposition of plans with respect to Drains had been communicated to the Local Government Board, the London County Council, and the London Borough Council. The Council, acting on the recommendation of the Practice Committee, have issued invitations to those of the Borough Councils who expressed themselves as being in sympathy with the Institute to join the Practice Committee in a deputation to the London County Council. The Surveyors' Institution has also been invited to send representatives.

Education of the Public. On the suggestion of the President, the Council have appointed a small Committee to recommend steps whereby the ignorance of the general public in architectural matters may be somewhat mitigated. The Committee have not yet issued their report.

Past Presidents' Portraits &c. The Council have had an album prepared containing photogravures of the interesting collection of the portraits of Past Presidents. Blank plates have been left for the insertion of future portraits. The price of the album is two guineas.

The presentation of the portrait of Sir William Emerson by Mr. J. J. Shannon, R.A. [*H.A.*], will take place at an early date. Some delay has been caused owing to Mr. Shannon's long absence in America.

The Council have the pleasure to state that Mr. Solomon J. Solomon, A.R.A. [*H.A.*], has kindly accepted the commission to paint the portrait of Sir Aston Webb, R.A., Past President.

The memorial tablet to Mr. F. C. Penrose, Past President, in the crypt of St. Paul's, was unveiled on 18th June last. The Dean of St. Paul's conducted the service, and Sir L. Alma-Tadema, R.A. [*Hon. F.*], performed the ceremony of unveiling.

Appointments &c. The Council, at the invitation of H.M. Government, suggested the names of seven architects for the proposed extension of the British Museum. Mr. J. J. Burnet, A.R.S.A. [*F.*], was the architect selected.

At the request of the Minister for Foreign Affairs that the Council would advise him as to two architects whose names he might, in response to invitation, submit to the Dutch Government as fitting persons to be invited to prepare designs in an international competition for the Carnegie Foundation—"The Palace of Peace"—at the Hague, and as to a third who could serve on the International Jury, the Council nominated the President, Mr. John Belcher, A.R.A., and Sir Aston Webb, R.A., to represent Great Britain in the competition, and Mr. T. E. Collcutt, Vice-President, to serve on the International Jury. The Council have since learned through the Genootschap "Architectura et Amicitia" of Amsterdam that the Carnegie Foundation Commission have decided to throw the competition open to all architects, while at the same time specially inviting representative architects from the various countries to compete.

Mr. W. H. Atkin Berry [*F.*] has been appointed as an additional representative of the Institute on the Committee of the Coal Smoke Abatement Society.

The President and Mr. J. S. Gibson [*F.*] were appointed by the Council to represent the Institute on a deputation from various bodies to the Croydon County Council with regard to the proposed demolition of Whitgift Hospital, Croydon.

The honour of knighthood has been conferred during this year on Sir Aston Webb, R.A., Past President, and Sir Henry Tanner [*F.*], Chief Surveyor to H.M. Office of Works.

Bequests and Donations. The Institute has received a bequest of £1,000, under the will of the late J. T. Wimperis [*F.*], to be applied to the furtherance of architectural education or the interests of the Institute in any way that may seem good to the Council.

Sir Aston Webb, R.A., has presented the Institute with 19 shares, and Mr. J. Macvicar Anderson with 24 shares, in the Architectural Union Company, the income to be applied, at the discretion of the Board of Education, to the furtherance of architectural education.

Grants. Since the issue of the last Annual Report the Council have made the following grants:

The Cretan Exploration Fund, 50 guineas.

The British School at Rome, 20 guineas.

The Manchester Society of Architects, £25 for educational purposes.

They have also voted a grant of 100 guineas towards the expenses of the defendant in the case *Gibbon* v. *Pease* with regard to the ownership of drawings lately heard before the Court of Appeal.

They have further voted a grant of £500 to the funds of the Seventh International Congress, London 1906, the grant to be spread over two years.

Seventh International Congress. The Council desire to draw the special attention of members to the importance of this Congress, which will be held in London from the 16th to the 21st July next year, and to express the hope that it will be loyally supported. To conduct this large undertaking on a scale worthy of Great Britain and British Architecture will need

considerable outlay, and the Council take this opportunity of expressing the hope that every member of the Institute will contribute to the funds by enrolling himself as a member of the Congress. Following the precedent of the previous six Congresses, there will be two classes of members—contributing members and subscribing members—whose dues are £4 and £1 respectively. A preliminary notice has already been issued by the Executive Committee and printed in full in the JOURNAL of the 28th January 1905, and in *The Times* of a few days later. The Executive Committee are in communication with all the Architectural Societies abroad and the various foreign sections of the Permanent International Committee, and as soon as all the replies from these have been received will issue a more detailed programme.

Competitions. The following have been the late and present President's appointments to Assessorships during the official year:

Aberystwith	Public Library	Mr. S. B. Russell.
Bexhill-on-Sea	Schools	Mr. A. H. Ryan-Tenison.
Bristol	Imbecile Institution	Mr. Edwin T. Hall.
Bromley	Municipal Buildings	Mr. J. S. Gibson.
Bucks	Royal Latin School	Mr. H. W. Wills.
Coventry	Hospital Extension	Mr. Edwin T. Hall.
Epsom	Church	Mr. G. H. Fellowes Prynne.
Grantham	Church	Mr. G. H. Fellowes Prynne.
Leigh	Schools	Mr. Mervyn Macartney.
Radcliffe	Free Library	Mr. John Holden.
Stockport	Elementary Schools	Mr. Alfred Darbyshire.
Taunton	Schools	Mr. Charles Hadfield.
Wallasey	Municipal Buildings	Sir William Emerson.
Wandsworth	Baths	Mr. A. Hessell Tiltman.
Worthing	Free Library and Technical Institute	Mr. John Belcher, A.R.A.

Copies of the "Suggestions" have been sent to the promoters of the following competitions, together with letters requesting that a copy of the conditions should be sent for the Institute Library. In cases where the conditions have been unsatisfactory, letters urging modifications have been sent to the promoters.

Aberystwith: Public Library.
Aylesbury: Schools.
Ayr: Pavilion.
Banbury: Municipal Offices.
Benwell: Public Library.
Blaenau Festiniog: Assembly Rooms.
Bootle: Memorial.
Bristol: Police Courts and Fire Station.
Bromley: Municipal Buildings.
Bury St. Edmunds: Shire Hall.
Calne: Public Library.
Caversham: Schools.
Cheltenham: Elementary Schools.
Cheshunt: Public Library.
Chippenham: Schools.
Colchester: Schools.
Croydon: Schools.
Dundee: Church.
Dunfermline: Library.
Egremont: Public Offices.
Egremont: Schools.
Fazakerley: Church.
Glasgow: Church.
Glasgow: Memorial.
Grantham: Church.
Hampstead: Mortuary.
Handsworth: Schools.
Herne Hill: Church, Parish Hall, and Vicarage.
Ilford: Free Library.
Lambeth: Home for Aged Poor.
Lambeth: Municipal Buildings.
Lancaster: Municipal Buildings.
Leeds: Schools.
Leigh: Schools.
Liverpool: Church.
Liverpool: Tramway Offices.
Llanelly: Schools.
Lurgan: Labourers' Cottages.
Nelson: Free Library.
Newcastle-on-Tyne: War Memorial.
Northwich: Schools.
Ossett: Town Hall.
Otley: Infirmary.
Perth: City Hall.
Peterborough: Free Library.
Preston: Elementary Schools.
Radcliffe: Free Library.
Rochester: Technical Institute.
Southwark: Clock Tower.
Stamford: Public Library.
Stockport: Elementary Schools.
Sunderland: Schools.
Swindon: Schools.
Taunton: Schools.
Tweedmouth: Schools.
Uxbridge: Union Offices.
Wallasey: Municipal Buildings.
Wallasey: Schools.
Wallsend: Municipal Buildings.
Welshpool: Laying out Open Space.
Whitehaven: Public Library.
Wrexham: Library.

The Competitions Committee have amended the "Suggestions," which they propose henceforth to call "Regulations," and the Council have approved the Committee's recommendations. The Amended Paper will be submitted to the General Body at a Business Meeting on the 1st May.

Finance. A statement of income and expenditure, and the balance sheet for the year ending 31st December 1904, and the estimate of income and expenditure for the current year, are appended to this Report (pp. 50 *sqq.*).

The balance of income over expenditure is £1,680, the largest on record, which the Council venture to think is a proof of the continued financial prosperity of the Institute.

The Council have this year invested the sum of £1,500 in the purchase of Cape of Good Hope 3½ per cent. stock and £1,000 in the purchase of Great Northern Railway 4 per cent. Preference stock. The total invested capital of the Institute now amounts to £18,000.

REPORT OF THE ART STANDING COMMITTEE.

At the first meeting of the Committee Mr. J. Macvicar Anderson was elected Chairman, Mr. Ernest George Vice-Chairman, and Messrs. J. S. Gibson and W. D. Caröe Hon. Secretaries.

During the Session the Committee have held three meetings, and have had under consideration the following matters:

The Widening of Berwick-on-Tweed Bridge;
The Wood Pediments and Dome of Somerset House;
The Advertisement Abuses on Buildings;
The Royal Commission on London Traffic.

The matter of the widening of the fine old stone bridge at Berwick-on-Tweed has been again before the Committee, and by the courtesy of Mr. Reade [*H.A.*], Messrs. Reade & Riley's designs for the proposed works were laid before the Committee, and it was felt that the engineers had, on the whole, dealt satisfactorily with the difficult problem of widening an old structure. In some small matters of detail Mr. Reade kindly consented to consider the suggestions of the Committee, and to bring before it at a later date the detailed drawings for the proposed works. It was felt that the character and interest of the bridge had been safeguarded, and in some measure this had been done in consequence of the action of the Committee.

With regard to the present wood pediments and dome on the centre part of Somerset House, fronting the river, the Committee felt that some action should be taken, and consequently forwarded a Resolution to H.M. Office of Works that it was desirable to replace the present wood pediments and drum of the dome by Portland stone, carrying out the existing design. There are no apparent structural difficulties in the way of this being done, and it was considered that a more permanent material would harmonise with the monumental character of the buildings. Beyond a formal acknowledgment of the Committee's letter, no reply has been made by H.M. Office of Works, and it is felt that this matter is of such public importance as to warrant a further letter being sent to the Office of Works.

The Committee forwarded to all the Metropolitan Borough Councils a communication

respecting the abuse of advertisements on buildings with a view to enlisting their support and sympathy, and were gratified to have responses from ten Metropolitan Borough Councils expressing their sympathy with the objects in view; and a resolution was therefore sent to the London County Council drawing attention to the abuse of many buildings in prominent London streets by being disfigured with advertisements which were practically of a permanent character, and suggesting that the London County Council should obtain powers to prevent the disfigurement of streets and buildings by advertisements.

With respect to the Royal Commission on London Traffic the Committee suggested that in all future schemes of public improvements for London streets the Institute should be consulted at an early stage with respect to their architectural aspect and development, and it is satisfactory to note that the Royal Commission, in acknowledging the receipt of the suggestion, stated that in future works of this character the Institute would be consulted in the initial stages.

Had this been done in the matter of the alignment of the north frontage of the Strand Improvement Scheme it is probable that the view from the west of St. Clement Danes Church would have been preserved; by proposed mutilation half of the west front of the church will be hidden by the new north frontage of the Strand; and it is deeply to be regretted that the advice of the Institute in this matter was not asked.

REPORT OF THE LITERATURE STANDING COMMITTEE.

Since the election of the present Committee in June 1904 the Literature Committee have held seven meetings. At the first meeting Mr. R. Phenè Spiers was reappointed Chairman; Mr. Paul Waterhouse was appointed Vice-Chairman; Messrs. Leslie Waterhouse and A. Maryon Watson were appointed Honorary Secretaries.

Acting in accordance with previous custom, a list of Sessional Papers arranged for by the Committee was forwarded to the Council, and as the result of a letter addressed to the Secretary the Committee have been informed that the Council have decided to entrust the final settlement of the Sessional Papers in future to a small Committee of Council, and to invite the Literature Committee (with the other Standing Committees) to send in during the Session suggestions for two or three Papers on subjects within the Committee's sphere of interest.

The Committee desire again to acknowledge their indebtedness to the authors of the various reviews and articles contributed to the JOURNAL, and to the publishers who have contributed many interesting works to the Library during the year.

The extra grant of £25, again received from the Council, has enabled the Committee to extend the Loan Collection by the purchase of many much-needed works in duplicate; these increased facilities have been much appreciated by the students who use the Library.

The Committee desire also gratefully to acknowledge the increase by the Council of the yearly grant to the Library; the amount of the total grant is now, therefore, £150.

The Librarian reports to the Committee as follows:

During the twelve months ending on the 31st March of the present year 202 volumes and 41 pamphlets have been added to the Library of the Royal Institute, exclusive of periodicals, reports, and Transactions of Societies, and parts of works issued in serial form.

The number of works presented to the Reference Library was 54 volumes and 39 pamphlets. The

works purchased comprise 116 volumes, out of which 68 volumes were added to the Loan Library. There were also 32 volumes presented to the Loan Library.

The attendance of readers in the Reference Library numbered 5,577 (last year 4,862). The number of works issued on loan was 3,406 (last year 3,020), 118 volumes having been issued to Fellows, 613 to Associates, 1,119 to Students, 1,060 to Probationers, and 496 to Ticket Holders.

The number of books issued through the post was 98 (last year 76). The number of tickets issued for admission to the Library, other than to members of the Institute or to Students and Probationers, was 88.

A Supplement to the Loan Library Catalogue, comprising additions to the end of 1904, has been prepared and printed. Copies can be obtained on application.

Donations of books have been received from Prof. F. Meldahl, Baron H. F. von Geymüller, Count Robert de Lasteyrie, Mr. Benjamin Ingelow, Mons. C. Nizet, Mr. R. Phenè Spiers, Mr. J. W. Gunniss, Mr. T. Harrison Myres, Mr. Mowbray A. Green, Mr. G. Hubbard, Sig. G. Giovannoni, Mr. Arthur Bartlett, and Mr. J. Francis Doyle.

Amongst the books presented or acquired during the year the following may be mentioned: Guadet's *Eléments et Théorie de l'Architecture*; Bühlmann's *Die Architektur des klassichen Altertums und der Renaissance*; Venturi's *Storia dell' Arte Italiana*; Brogi's *Disegni di Architettura Civile e Militare di Artisti Italiani fioriti dal XV. al XVIII. Secolo tratti dalla raccolta della R. Galleria degli Uffizi*; Havard's *Dictionnaire de l'Ameublement*; Rayet's *Monuments de l'Art Antique*; Geymüller's *Michelagnolo Buonarroti als Architekt*; Spiers's *Architecture East and West*; Green's *Architecture of Bath*; Muthesius's *Das Englische Haus*; Mothes's *Die Baukunst des Mittelalters in Italien*; and Gardner's *Old Silver Work*.

LIBRARY STATISTICS 1904–5.

Date	Day Attendances, 10 a.m. to 5 p.m.					Evening Attendances, 5 p.m. to 8 p.m.					Books issued on Loan.
	Members.		Non-members.			Members.		Non-members.			
	Library.	Periodicals only.	Library.	Periodicals only.	Total.	Library.	Periodicals only.	Library.	Periodicals only.	Total.	
1904.											
April	114	20	142	15	291	61	31	104	27	205	301
May	108	14	206	17	345	46	8	101	12	167	317
June	91	17	175	16	299	40	11	94	16	161	237
July	98	7	126	10	241	29	6	49	6	90	151
August	Reference Library closed.					Reference Library closed.					40
September	102	14	158	10	284	42	5	76	10	133	260
October	110	18	233	21	382	51	16	127	19	213	382
November	99	12	221	17	349	52	11	144	30	237	400
December	98	10	205	16	329	41	11	109	28	189	283
1905.											
January	129	16	223	25	393	52	10	125	17	204	342
February	100	15	196	19	330	54	10	111	27	202	305
March	87	25	171	20	303	48	10	151	21	230	388
Total	1136	168	2056	186	3546	516	111	1191	213	2031	3406

REPORT OF THE PRACTICE STANDING COMMITTEE.

Nine meetings have been held since the last Report. The following officers were elected at the commencement of the Session:—Mr. A. H. Kersey (Chairman), Mr. Ernest Flint (Vice-Chairman), Mr. C. H. Brodie and Mr. E. Greenop (Hon. Secretaries).

The London Building Acts Amendment Bill, 1905.—This new Bill, brought in by the London County Council, was referred by the Council to the Committee, who recommended that a Parliamentary Committee, consisting of representatives of the Standing Committees, should be appointed to consider and report upon the Bill, and, if necessary, take steps to oppose it in Parliament. Acting upon this recommendation the Council appointed a Special Committee, consisting of seven members of the Practice Committee and two each of the Science and Art Committees, Mr. Douglass Mathews being elected Chairman. Ten meetings were held. A Form of Petition to Parliament against the Bill, and praying to be heard in Committee in opposition, was drawn up and adopted by the Council, and Counsel were appointed to represent the Institute before the Parliamentary Committee of the House of Commons.

The whole Bill was considered in detail, and a List of Observations and Suggestions prepared by the Committee. Before, however, the list was placed before the Council the whole Bill, with the exception of Part VIII., dealing particularly with additional protection from fire, was, owing to the extremely strong opposition from all quarters, withdrawn by the London County Council.

The Committee have still under consideration their action with regard to Part VIII. of the Bill, with which the London County Council have expressed their intention to proceed.

City of London Bill (*Means of Escape from Fire*). This Bill was also referred by the Council of the Institute to the Special Committee, and it is still under consideration.

New By-laws of the L.C.C. under the Metropolitan Management Acts Amendment Act, 62 *and* 63 *Vict.*, *c.* 15.—As stated in the Committee's Report of last Session, the Institute Council, on the recommendation of the Committee, by a circular letter called the attention of the various Borough Councils to the very onerous and unnecessary liabilities imposed on owners of property by these by-laws recently passed by the London County Council. Since the date of that Report, eighteen replies have been received from the Borough Councils addressed, of which nine are more or less in agreement with the Institute, four neutral, and five in opposition. The Committee have therefore recommended the Council to try to arrange a deputation of representatives of the Borough Councils, the Surveyors' Institution, and the Royal Institute of British Architects to attend on the L.C.C. and put forward their views.

Professional Advertising.—The question of members of the Institute advertising in newspapers, as practised in some cases in the provinces, was referred by the Council to the Committee, who recommended the Council to take means to prevent or induce its members to discontinue this practice,which they considered derogatory and damaging to the status of the architectural profession.

The question of members of the Institute describing themselves as "valuers" and "estate agents" in newspaper advertisements and elsewhere was also referred to the Committee, who reported to the Council that in their opinion nothing further than the description "architect" or "architect and surveyor" was consistent with the dignity of the profession.

Sessional Papers.—The Council requested the Committee to assist them in the choice of

subjects for Papers to be read during the following Sessions, and the Committee expressed their willingness to offer suggestions from time to time.

Extraordinary Traffic on Roads during Building Operations.—The Council referred to the Committee a request by the Institute of Builders that provisions should be made in building contracts by which the charges of county and urban authorities in these matters should be ascertained by architects previous to the making of contracts, and the liability removed from the shoulders of the contractors. The Committee, however, recommended to the Council that the suggestion should not be adopted.

Law Cases.—The cases of *Howard* v. *Colls, Orf* v. *Payton, Robins* v. *Goddard, Patman and Fotheringham* v. *Pilditch,* and others were considered by the Committee.

Members' Queries.—The opinion of the Committee upon several matters affecting the profession was requested by members, and replies furnished.

REPORT OF THE SCIENCE STANDING COMMITTEE.

The Science Committee have held six meetings, with an average attendance of twelve, since the last Report was published.

Mr. Lewis Solomon was appointed Chairman, Mr. Max. Clarke Vice-Chairman, and Mr. H. D. Searles-Wood and Mr. Bernard Dicksee Hon. Secretaries.

The Committee have been engaged on standardising the specification and tests for Portland cement, the Chairman has attended the meetings of the Joint Standard Committee, and the standard has been fixed and is now published. The Committee are now considering the tests that can be put in specifications when only small quantities of cement are required. The Committee are inquiring into the present method of applying Dr. Angus Smith's solution and other preparations for protecting iron.

The Plumbers' Company submitted their second series of diagrams for the criticism of the Committee. The proposal to form a collection of building stones, with full information as to their nature, composition, &c., at the Museum of Geology, Jermyn Street, came before the Committee, and they have recommended the Institute to assist in collecting the information required.

The subject of working loads and stresses has been under consideration.

The Report on the Brickwork Tests is in print, and will shortly be published.

FINANCES.

The accounts of Ordinary and Trust Funds for 1904, prepared by Messrs. Saffery, Sons, & Co., chartered accountants, and audited by Messrs. Sydney Perks [*F.*] and H. A. Crouch [*A.*], the Hon. Auditors appointed at the Annual General Meeting of 1904, here follow:—

Income and Expenditure Account of Ordinary Funds for the Year ended 31*st December* 1904.

Dr. Exclusive of Entrance Fees, Final Examination Fees, and Subscriptions in advance. **Cr.**

EXPENDITURE.

	£	s.	d.	£	s.	d.
To Ordinary Expenditure—						
Rent	935	0	0			
Gas and Electric Lighting	120	4	4			
Coals	15	12	0			
				1070	16	4
Salaries				1760	16	10
General Printing, Stationery, Stamps, and Petty Expenses				673	2	6
Expenses of General Meetings, Exhibitions, &c.				271	14	10
Housekeeping				171	6	2
Advertisements				53	8	9
Examination Expenses				453	3	0
General Repairs				108	16	5
Fire Insurance				33	15	6
Medals and other Prizes				29	4	0
Grants to Library	125	0	0			
Grant to Architectural Association	100	0	0			
Grant to Royal Architectural Museum	21	0	0			
Grant to Architects' Benevolent Society	21	0	0			
Grant to British Schools at Athens and Rome	42	0	0			
Grant to Cretan Exploration Fund	52	10	0			
Grant to Manchester Society Prize Fund	25	0	0			
Grant to International Congress Funds	25	0	0			
				411	10	0
The Journal—						
Reporting	55	13	0			
Printing and Binding	724	19	8			
Illustrations	212	18	1			
Addressing, Postage, and Carriage	272	14	7			
				1266	5	4
The Kalendar –						
Printing	174	1	10			
Postage and Carriage	24	14	11			
				198	16	9
Contributions to Allied Societies				312	10	6
Miscellaneous Expenses—						
Legal and Accountants' Charges	56	1	8			
Album of Portraits of Past Presidents	73	15	0			
Memorial to Local Councils	53	8	6			
Honorarium to Staff	88	13	6			
Madrid Congress	28	17	0			
Miscellaneous	23	5	8			
				324	1	4
Balance of Income over Expenditure				1680	0	6
				£8819	8	9

SAFFERY, SONS, & CO.,
Chartered Accountants.

INCOME.

	£	s.	d.	£	s.	d.
By Ordinary Income—						
Subscriptions—						
628 Fellows at £4. 4*s.*	2637	12	0			
Ditto, on Account	1	1	0			
Ditto, Arrears	68	5	0			
1,060 Associates at £2. 2*s.*	2226	0	0			
Ditto		12	0			
Ditto, Arrears	112	7	0			
36 Hon. Associates at £2. 2*s.*	75	12	0			
Ditto, Arrears	12	12	0			
				5134	1	0
Dividends on Stocks and Shares –						
Architectural Union Co.	184	2	0			
Consols 2½ per Cent.	52	7	1			
Tasmanian Government Stock 3½ per Cent.	63	3	11			
Dominion of Canada 3 per Cent.	34	5	6			
Queensland Government 3 per Cent.	46	18	10			
Great Western Railway 5 per Cent. Preference	35	12	4			
London and North-Western Railway 4 per Cent. Preference	33	3	10			
Madras Railway 4½ per Cent.	64	9	1			
Interest on Deposit	33	12	3			
				547	15	1
Journal and Kalendar—						
Advertisements	900	0	0			
Sales	112	6	10			
				1012	6	10
Sales of other Publications				419	18	10
Use of Rooms—						
District Surveyors' Association	25	0	0			
Architectural Association	6	10	0			
R.I.B.A. Tenants	55	0	0			
Architectural Vigilance Society	5	0	0			
				91	10	0
By sale of Presidents' Album				12	12	0
Examination Fees—						
Statutory	28	7	0			
Preliminary	787	10	0			
Intermediate	564	18	0			
Special and Final (forfeited)	220	10	0			
				1601	5	0
				£8819	8	9

Examined with the several vouchers and found to be correct. 17*th March* 1905. (Signed) {SYDNEY PERKS [*F.*].
H. A. CROUCH [*A.*].

Dr. *Balance Sheet of Ordinary Funds,* 31*st December* 1904. **Cr.**

LIABILITIES.

	£	s.	d.	£	s.	d.
To Sundry Creditors outstanding				230	11	0
To Examination Fees anticipatory of election				189	0	0
To Subscriptions for 1905-6 received in advance				120	10	0
To Building Fund				1087	6	8
To Charitable Fund				195	11	9
To Travelling Fund				1385	4	0
To *Accumulated Fund* —						
Surplus of liquid assets over Liabilities as per last Balance Sheet	13052	6	8			
Add Entrance Fees received in 1904	357	0	0			
Arrears for 1904 (as per contra)	212	11	0			
	13621	17	8			
Less Arrears 1903, since received or cancelled £216 15 0						
Furniture and Fittings bought 34 18 0						
	281	13	0			
	13340	4	8			
Add Balance of Income over Expenditure in 1904	1680	0	6			
				15020	5	2
				£18228	11	7

SAFFERY, SONS, & CO.,
Chartered Accountants.

ASSETS.

	£	s.	d.	£	s.	d.
By Cash at Bank				2372	3	3
By *Investments at cost*—						
Architectural Union Co., 263 Shares	3643	1	0			
Consols 2½ per Cent. £2200 10*s.*	2233	12	2			
Tasmanian Government 3½ per Cent. Stock £1896. 8*s.* 9*d.*	2050	0	0			
Dominion of Canada 3 per Cent. Registered Stock £1200	1219	11	0			
Queensland Government 3 per Cent. Stock £1643. 9*s.* 1*d.*	1550	0	0			
Great Western Railway 5 per Cent. Preference Stock £747	1199	16	10			
London and North-Western Railway 4 per Cent. Consolidated Preference Stock £871	1049	5	8			
Madras Railway 4½ per Cent. Stock £1050	1385	4	0			
By *Building Fund*—						
Indian Government 3½ per Cent. Stock £1901. 4*s.* 1*d.*	1087	6	8			
				15417	17	4
By Debtors (Rents, Advertisements, &c.)				178	15	0
By Subscriptions in Arrear 1903	47	5	0			
Ditto 1904	212	11	0			
				259	16	0
				£18228	11	7

Examined with the several vouchers and found to be correct. 17*th March* 1905. (Signed) {SYDNEY PERKS [*F.*].
H. A. CROUCH [*A.*].

Revenue Account of Trust Funds for the Year ended 31st December 1904.

Dr.

	£	s.	d.
ASHPITEL PRIZE FUND:—			
To Cost of Ashpitel Prize [Mr. F. W. Newman (A.)]	10	0	0
To Balance carried forward	28	2	0
	38	2	0
DONALDSON TESTIMONIAL FUND:—			
To Balance carried forward	5	10	7
	5	10	7
GODWIN BURSARY:—			
To Grant to Mr. H. P. Fletcher [F.]	35	0	0
To Balance carried forward	86	7	8
	121	7	8
GRISSELL LEGACY:—			
To Cash paid Medallist [Mr. J. W. Hepburn]	10	10	0
To Cost of Medals	11	18	0
	22	8	0
LIBRARY FUND:—			
To Purchase of Books, Binding, &c.	129	4	6
To Petty Expenses	4	17	1
To Balance carried forward	32	11	11
	166	13	6
OWEN JONES STUDENTSHIP:—			
To Cash paid 1903, 1st instalment [Mr. Davidson]	50	0	0
To Cost of Medal	2	0	0
To Balance carried forward	222	9	5
	274	9	5
PUGIN MEMORIAL FUND:—			
To Balance from last account	6	17	1
To Cash paid Student 1903 [Mr. J. H. Gibbons (A.)]	40	0	0
To Cost of Medal	3	9	6
	50	6	7
SANON SNELL BEQUEST:—			
To Cash from Executors	750	0	0
	750	0	0
TITE LEGACY FUND:—			
To Cash paid Prizeman 1902 [Mr. C. Gascoyne], balance	10	0	0
To Cash paid Prizeman 1903 [Mr. D. Smith], balance	10	0	0
To Cost of Medal	2	0	0
To Balance carried forward	20	15	0
	42	15	0
ARTHUR CATES LEGACY:—			
To Amount paid Prizeman [Mr. F. W. Newman (A.)]	21	0	0
To Balance carried forward	56	3	10
SAFFERY, SONS, & CO., Chartered Accountants.	77	3	10

Cr.

	£	s.	d.
By Balance from last Account	24	2	0
By Dividend on 20 Shares, Architectural Union Co., at 14s. per share	14	0	0
	38	2	0
By Balance from last Account	2	17	5
By Dividends on £72 L. & N.-W. Railway 4 per Cent. Preference Stock	2	13	2
	5	10	7
By Balance from last Account	82	3	6
By Dividends on £1030 Caledonian Railway 4 per Cent. Debenture Stock	39	4	2
	121	7	8
By Balance from last Account	8	12	6
By Dividends on £20. 0s. 8d. B Annuity Great Indian Peninsula Railway	13	14	2
By Balance carried forward	0	1	4
	22	8	0
By Balance from last Account	22	12	3
By Annual Donation from Mr. Sydney Smirke [F.]	5	0	0
By Annual Grant from Ordinary Fund	100	0	0
By Special Grant from Ordinary Fund (Loan Collection)	25	0	0
By Entrance Donation of Honorary Associates	8	8	0
By Fines, &c. (Loan Library)	5	13	3
	166	13	6
By Balance from last Account	171	7	3
By Dividends on £2128 Midland Railway 2½ per Cent. Debenture Stock	50	14	1
By Dividends on £1100 Great Western Railway 5 per Cent. Consolidated Stock	52	8	1
	274	9	5
By Dividends on £1070 L. & N.-W. Railway 4 per Cent. Preference Stock	40	17	10
By Balance carried forward	9	8	9
	50	6	7
By Balance in hand	750	0	0
	750	0	0
By Balance from last Account	15	7	4
By Dividends on £1150 2½ per Cent. Consols	27	7	8
	42	15	0
By Balance from last Account	32	19	4
By Dividends on £1160 4 per cent. N.-E. Railway Consolidated Stock	44	4	6
	77	3	10

Examined with the several vouchers and found to be correct. 17*th March* 1905. (Signed) { SYDNEY PERKS [*F.*]. H. A. CROUCH [*A.*].

Dr. *Balance Sheet of Trust Funds, 31st December* 1904. **Cr.**

	£	s.	d.
To Ashpitel Prize Fund:—			
Capital—20 Shares in the Architectural Union Company, Limited, at £14 per Share	280	0	0
Balance at credit of Revenue Account	28	2	0
To Donaldson Testimonial Fund:—			
Capital—£72 L. & N.-W. Railway 4 per Cent. Preference Stock	89	0	0
Balance at credit of Revenue Account	5	10	7
To Godwin Bursary Fund:—			
Capital—£1030 Caledonian Railway 4 per Cent. Debenture Stock	1344	13	6
Balance at credit of Revenue Account	86	7	8
To Grissell Legacy Fund:—			
Capital—£20. 0*s.* 8*d.* B Annuity Great Indian Peninsula Railway, formerly £300 5 per Cent. Guaranteed Stock	513	14	10
To Library Fund:—			
Balance at credit of Revenue Account	32	11	11
To Owen Jones Studentship Fund:—			
Capital—£2128 Midland Railway 2½ per Cent. Debenture Stock (£ 1773 0 0)			
£1100 Great Western Railway 5 per Cent. Consolidated Stock (1900 12 0)			
	3673	12	0
Balance at credit of Revenue Account	222	9	5
To Pugin Memorial Fund:—			
Capital—£1070 L. & N.-W. Railway 4 per Cent. Preference Stock	1342	12	6
To Saxon Snell Bequest:—			
Capital Cash in hand	750	0	0
To Tite Legacy Fund:—			
Capital—£1150 2½ per Cent. Consols	1109	1	6
Balance at credit of Revenue Account	29	15	0
To Arthur Cates Legacy Fund:—			
Capital—£1160 N.-E. Ry. 4 per Cent. Consolidated Stock	1504	5	6
Balance at credit of Revenue Account	56	3	10
Saffery, Sons, & Co., Chartered Accountants.	£11059	0	3

	£	s.	d.
By Government and other Securities for total cost value of Trust Funds invested	9856	19	10
By Balance Pugin Memorial Fund	9	8	9
By Balance Grissell Legacy Fund	0	1	4
By Cash in hands of Bankers	1192	10	4
	£11059	0	3

Examined with the several vouchers and found to be correct. 17*th March* 1905. (Signed) { Sydney Perks [*F.*]. H. A. Crouch [*A.*].

The Council submit an Estimate of Income and Expenditure of Ordinary Funds for the year ending 31st December 1905, exclusive of Entrance and Final Examination Fees:—

Estimate of Income and Expenditure for Year ending 31*st December* 1905.

EXPENDITURE.	£	s.	d.
Rent, Lighting, and Warming	1100	0	0
Salaries	1780	0	0
General Printing, Stationery, Postage, and Petty Expenses	675	0	0
General Meetings, Exhibitions, &c.	275	0	0
Housekeeping (including Office Attendant)	175	0	0
Advertisements	60	0	0
Examination Expenses	466	0	0
General Repairs	250	0	0
Fire Insurance	35	0	0
Medals and other Prizes	195	0	0
Grants to Library	150	0	0
Grant *re* Gibbon *v.* Pease	100	0	0
Grant to Congress	225	0	0
Other Grants (A.A., A.B.S., and British Sch. Rome)	164	0	0
Journal	1250	0	0
Kalendar	200	0	0
Contributions to Allied Societies	320	0	0
Miscellaneous— (£ s. d.)			
Legal Charges (London Building Act) 250 0 0			
Registration Bill 50 0 0			
Legal and Accountant's Charges 60 0 0			
Dinner 50 0 0			
Miscellaneous 20 0 0			
	430	0	0
Estimated Balance	1200	0	0
	£9050	0	0

INCOME.	£	s.	d.
Subscriptions and Arrears	5250	0	0
Dividends on Stocks and Shares and Interest on Deposit Account	610	0	0
Sale of Publications (other than Journal and Kalendar)	425	0	0
Journal and Kalendar— (£ s. d.)			
Sales 120 0 0			
Advertisements 900 0 0			
	1020	0	0
Use of Rooms	85	0	0
Examination Fees—			
Statutory 30 0 0			
Preliminary 820 0 0			
Intermediate 610 0 0			
Special and Final (Extra Fees) 250 0 0			
	1660	0	0
	£9050	0	0

AUDITORS' REPORT FOR 1904.

We have carefully examined the accounts of Expenditure and Income for the year 1904, and have much pleasure in reporting that we consider the books of the Institute have been accurately and well kept.

Reference to the Estimate published in last year's Annual Report will show several satisfactory features. A saving has been effected in the following items:—

Lighting and Warming, General Printing &c., Expenses of General Meetings, Advertisements, General Repairs, Medals and Prizes, and miscellaneous expenses. The total Estimate for expenditure for 1904 was £7,185 and the actual expenditure has been £7,139, notwithstanding the fact that several additional grants, amounting to over £120, have been made by the Council.

The actual Receipts amounted to nearly £400 more than was estimated; the result is a larger balance than has ever been carried forward.

During the year the sum of £2,467 6*s*. has been added to the invested Capital; the total is now £15,417 17*s*. 4*d*. The Accountants report that the market value of these investments at the 31st December last was £1,031 less than the purchase value.

The Subscriptions show a small increase, but the Examination Fees were nearly £250 more than in 1903.

We think that on future occasions it would interest members if the profits from the publications were classed under different headings.

We regret that the loss upon the publication of the Album of Portraits of Past Presidents has been so large. The cost was about £145, and only six copies have been sold. If the price were reduced from £2 2*s*. to, say, £1 1*s*. it might help the sale.

The number of the Hon. Associates unfortunately is decreasing, and we suggest that the subscription might be lowered and the entrance fee waived.

We note that the state of the finances is most satisfactory, and were surprised when examining the books to find that the remuneration of the senior officials is not higher, particularly in view of the salaries paid to the officials of other learned Societies.

17th March 1905.

SYDNEY PERKS,
HENRY A. CROUCH, } *Hon. Auditors.*

DISCUSSION OF THE ANNUAL REPORT.

Mr. HENRY T. HARE, *Vice-President*, in the Chair.

MR. G. A. T. MIDDLETON [*A.*] said there was one clause of the Report upon which he desired to offer some criticism—viz. that dealing with the Registration Committee. When that Committee was formed, he had given notice of certain motions, and had proposed a motion. Had his motion been carried, what the Registration Committee had done would have been in order. But his motion was not carried; an amendment was carried, which he accepted, appointing a Committee "To consider the principle of registration and report thereon"—nothing more. So he should be very sorry to let this go forward unless it was well understood that the Committee, when it did report, would put itself in order and report upon its reference. Only the principle of registration was referred to the Committee; and it was the principle only upon which it had to report. According to the Annual Report the Committee had exceeded its Reference, and although to a certain extent it might be a compliment to himself personally, as showing that his original motion was right, yet he hoped that the Committee, when it reported, would report exactly upon its Reference, at least in the first place, whatever it might do subsequently.

THE CHAIRMAN pointed out that it was hardly open to Mr. Middleton to assume that the Committee was going to report in any sense contrary to or conflicting with the instructions of the General Meeting. It was stated in the Annual Report that the Committee hoped to submit a Draft Bill at an early general meeting. It did not necessarily follow that that would be their report upon the principle of registration. He thought that when the Report was before the Institute would be the time for Mr. Middleton to raise his question.

MR. WM. WOODWARD [*A.*] said he thought they should all agree that there was steady and satisfactory progress with the membership of the Institute. They had 54 more Fellows than in 1903, and 117 more members altogether. If the Institute continued to increase in that proportion they should soon be able, with the funds at their disposal, to commence the erection of the new premises which they all desired, and which he thought they all deserved. With regard to the London Building Act Amendment Bill the Institute must be congratulated upon the action they had taken with regard to it, because that action, combined with the action of many other public bodies, had, no doubt, led to the withdrawal of a great part of that Bill. There was, however, a section left which to his mind was as dangerous as any other portion of the Bill, and he ventured to suggest that every word of that

section which was left should be very carefully considered by the technical gentlemen who, he understood, had been appointed to consider it. He believed it would be found that the inroads upon public liberty and the dislocation of people's comfort and the mutilation of their buildings which would take place under that particular section would show that it was by no means the most innocent clause which had been retained by the London County Council. On page 42 there was a reference to the Board of Professional Defence. He thought the Institute was entitled to very great credit for that. Some members had for many years suggested that the Institute should assist by money professional men who were not able to defend themselves from what, in many cases, were most unjustifiable proceedings; and it was very satisfactory to find that the Institute would be able now to assist those poorer members of the profession who suffered and were not able, for the want of funds, to prosecute their own interests in the Courts. On page 42 there was a reference to the education of the public. The suggestion was that a small committee should be appointed to recommend steps whereby the ignorance of the general public in architectural matters might be somewhat mitigated. That appeared to him a very tall order. Upon what lines were they going to educate the public? Who of the members of the Institute felt confident to educate the public? An answer no doubt would occur at once to most of them. There were certain members of the Institute, if one might believe their writings and speeches, who were perfectly capable of educating the public on matters of architecture. One of them in that room the other evening had referred to certain architectural features in Regent Street by which he wished to educate the public. Amongst other things he said that there were two monstrosities on the east side of Regent Street which ought to be at once pulled down. One of those monstrosities, the building on the east side of Regent Street erected for Messrs. Brooks, the florists, he (Mr. Woodward) himself had erected; the other, the bigger monstrosity, as far as cubical contents went, Messrs. Robinson and Cleaver's building—owed its origin to the architects, Messrs. Crickmay. He wanted to be perfectly clear about it, because this was a case in which the public was being educated as to what architecture ought to be pulled down and what architecture ought to be retained! Having referred to the monstrosities, he would pass on to the education of the public. It was his pleasure to pass through Great Portland Street every morning, and he never passed Pagani's Restaurant without looking up and admiring the faience work which adorned the face of that building, and which was due to the learned Professor who called his (Mr. Woodward's) building a monstrosity. Then, having filled his eyes with the magnificent colour of the façade of Pagani's Restaurant he would proceed to another street, where he found two huge figures sitting upon a pediment carrying the architrave of a second floor window - another of the learned Professor's buildings. He ventured to think that the public would not be satisfied with this professional architecture. Therefore, he must leave the President of the Institute, who had made the happy suggestion of educating the public, to go into fresh woods and pastures new. There was a reference on page 43 to the bequests, and so far as education went they would welcome all the bequests made in that direction. The £100 given towards the expenses of the defendant in the case of *Gibbon* v. *Pease* was an instance of the great good that the Institute could do in supporting such cases. As regards the item of £500 subscribed to the funds of the International Congress of Architects to be held in 1906, that was a very large sum, and no details were given as to how it was proposed to be expended. Personally he had not the slightest idea what the Council's intentions were, but he thought some little information should be given to the meeting as to what was to be done with regard to that £500. On page 45 there was the very satisfactory announcement that the total capital of the Institute amounted to £18,000. He remembered when he filled the position of honorary auditor of the Institute—and it was always a pleasure to him to fill that position—he had ventured to recommend some of the very economies which had since been effected—and he had suggested that the Building Fund of the Institute might be very much increased; he was happy to see that it had been very much increased, and if it went on as it had done the last two or three years they might look forward to the time, at no distant date, when, like the Surveyors' Institution, they should have a building of their own, erected by themselves, really worthy of the Royal Institute of British Architects. As regards the expenditure on the JOURNAL and KALENDAR, £1,465 2*s.* 1*d.*; the receipts had been £1,021 6*s.* 10*d.*, making a net cost of £452 15*s.* 3*d.* Considering the great value of the KALENDAR and the great value of the JOURNAL they might congratulate the officers and the Council of the Institute upon giving them all that literature at so small a net cost as £452. There was an item on page 50 of £5 under the head of Income, "Architectural Vigilance Society." He did not know what that meant.

THE SECRETARY.—That means the rent of the Council Room for the meetings of the Society.

MR. WOODWARD.—I am glad that architectural vigilance costs so little. Continuing, Mr. Woodward said that there used to be some reference in the balance-sheet under the head of "Assets" to the busts and pictures belonging to the Institute; but there was now no reference whatever as to the property of the Institute under the head of "Assets." Then there was an item of £50 under the head of Expenditure for Registration Bill. No information was given as to how that £50 was proposed to be expended, whether in furthering a new Bill or in supporting the Registration Bill. Then there was a reference in the Auditors' Report to the salaries of the officials. He had, and he supposed most of them had had, very considerable experience as regards the officials of the Institute, whether as auditors or visitors, or as users of the library; and every one would agree that the courtesy, good feeling, and good nature of the officials were such as should highly recommend for them some increase of their salaries. He believed that the Institute could well afford to increase, as the Council might deem proper, the salaries of the officials, and he should be only too pleased, if it was necessary to take any vote upon the subject, to propose it. He was sure it would be found that there was a general desire on the part of members to increase the salaries of its officials who did such good work for them. In speaking of the officials he, of course, included their excellent friend the Librarian: they knew that no trouble was too great for him; whatever he could do to assist the students and themselves with regard to the library his services were always at their disposal. With regard to the Standing Committees, the Art Standing Committee had not much to say; but they spoke of the London County Council obtaining powers to prevent the disfigurement of streets and buildings by advertisements, and no doubt a great deal of good could be done in that way. But there was one thing that the Council might do—he had himself addressed the London County Council on the matter—with regard to pulling down old buildings in London. He happened to be at Nuremberg with a friend some years ago when some very old buildings were being pulled down, and they wondered why there was no dust; and, on making inquiry, the builder showed them a hose and stand-pipe, and told them that they turned water upon the buildings as they were demolished, and on the baskets as they were being carted away. It was a practice he himself had adopted for many years past, and he thought the Institute might endeavour to use its influence with the London County Council to make it a condition that every man who pulled down a

building in London should adopt this course of watering the *débris*. It cost not more than £5 per building, it saved an immense amount of trouble, and prevented much injury, not only to passengers from dust getting in their eyes, but to the rooms of the several occupiers. The Literature Committee had made a short report, but it showed that they were doing some good work. The Practice Committee referred to the new by-laws of the London County Council, which they said should be opposed. His experience of the London County Council was this: that if the Building Act of 1894 was not sufficient sometimes to give the architect enough trouble, it would be found that a sly by-law had been passed, about which one knew nothing, which was to give them a good deal more trouble. Therefore the more these by-laws were watched the better it would be for the profession and for the public generally. He was therefore very glad to see that the Institute had taken some notice of the by-laws proposed by the London County Council. With regard to professional advertising and the reference to the use of initials after the name, and to members of the Institute describing themselves as "valuers," he found in *T. P.'s Weekly* of the 28th April last, an advertisement under the head of "Antique Furniture," which referred to "Builders, Decorators, Upholsterers, Dealers in Works of Art, Architects, Surveyors, and Valuers." It would be seen in what estimation Architects were held by their calling being placed in juxtaposition with those of "Decorators and Upholsterers." Therefore the hint conveyed by the Practice Committee was well called for. On page 49 reference was made to the work of the Council with regard to certain law cases; but they only gave the titles of the cases. If a brief outline of the questions or principles involved were given to show what the case was, and what the action of the Institute was, it would be exceedingly useful in future. On page 49, under the head of the Science Standing Committee, there was a proposal that at the Geological Museum there should be formed a collection of building stones, with full information as to their nature. That was a most excellent suggestion. If one could go to the Geological Museum, which was a central place, and be able to see the various building stones, and get all necessary information about them, that would be a valuable addition to the already very valuable suggestions which had been adopted by the Institute. Coming to another point, a great deal had been said recently about the courts of justice, and the way in which architects were treated in the witness box. Those of them who were in the habit of giving evidence in the law courts must have noticed sometimes the tendency there was on the part of learned counsel to treat architects otherwise than with the respect which was due from one professional man to another. In the witness box one was not on equal terms with counsel. If an architect witness ventured to reply to a learned counsel in the same tone in which he asked a question he would be pulled up at once by the learned judge and told to answer the question. Particularly with regard to architects' charges, he thought when the scale of the Institute was introduced as the proper scale to be adopted, it would have greater weight if some communication were made by the Institute to the proper legal authorities—the Lord Chancellor or whoever it might be—stating that that scale of charges had been well considered by the Council of the Institute, and was a fair and proper scale to be adopted for the profession. Another thing, it was exceedingly regrettable when one found in the witness box an architect—sometimes a member of the Institute—prepared to say that some of the charges in that particular scale were excessive. Surely when they were giving evidence they should stick to that scale religiously. It was a proper scale adopted by the Institute, and whether it was binding in the courts of law or not, they themselves in giving evidence should stick to it as a proper scale of charges. Not to detain the meeting any longer, he was sure all would agree with him that during the last few years the Council of the Institute had shown a more enlightened view of the value of the Institute and of the power which it was possible for the Institute to exercise. He felt that in future more energy even than that which had been displayed during the last few years would be exercised, and its success would be greater still.

MR. E. W. HUDSON [*A.*] said that with regard to the education of the public in architectural matters, he was entirely in sympathy with the suggestion that some such attempt should be made. He did not see why because it was a difficult thing it was to be shelved; but who was going to throw the first stone? Already something had been done in the matter of educating the public so far as the municipalities and corporate bodies were concerned. A very proper course had been adopted in sending round that Encyclical Letter with regard to the carrying out of large public buildings being thrown open to competition or given to architects at large, and not confined to municipal officials. That was a step in the right direction. It had provoked adverse criticism and had even been called in a professional journal impertinence; but an unwelcome duty was none the less a duty, and he, personally, was in entire sympathy with it. With regard to the need for the education of the public and of municipalities, an instance occurred to him at the moment: the municipal authority of a city in one of our largest colonies in South Africa were intending to erect a building to cost over a quarter of a million of money, and having received tenders for it, they were now considering whether, in order to economise, knowing that the tender was under the estimate, they should substitute cement dressings in lieu of stone for the whole of the surfaces! There, at any rate, was a case where it was necessary to educate the public. He was in accord with Mr. Woodward in his remarks as to the way architects as witnesses were treated by counsel. They were told "not to mind, that every one was subject to it." But there was great difficulty, apart from that, in making the legal mind grasp the details of the architectural profession, and as it was suggested that their Honorary Associates were not as numerous as they might be, he thought it would be a good thing if gentlemen of the Bench and the Bar were invited to come in without any subscription at all that they might get to know architects and understand them better. They must often have felt what a desirable thing it would be if there were a professional gentleman sitting at the side of the Judge to guide him on some of the points which he seemed utterly to fail to grasp in the cases brought before him. He also agreed with Mr. Woodward with regard to the remaining clause in the London County Council's Bill; it was probably one of the most dangerous that could possibly have been left behind. It was gratifying to see what had been done in the Colonies with regard to architectural education, and if South Africa could ultimately be brought into line with Canada and Australia it would be a great advance. They must all be pleased to see the record of the honours which had been bestowed upon their esteemed Ex-President Sir Aston Webb; and though it had not been noticed in the Report as an official matter they must all be pleased to see the recognition by his professional brethren that Mr. Spiers had lately received. No one could have worked more and with greater assistance to architects both in and out of the Institute than Mr. Spiers had done throughout his career. He endorsed what Mr. Woodward had said with regard to the JOURNAL. He thought that the small cost at which they had received such an excellent Journal, and a Journal which had been borne witness to by leading members of the profession on the Continent, was a matter of which they might well be proud, and he was sure that their thanks were due to the Editor,

Assistant-Editor, and staff for the efficiency to which it had been brought. Reverting to the question of the scale of fees of the Institute, if only they could get the Bench and the Bar to reiterate in their ears the case of *Whipham* v. *Everitt*, where the learned Judge, instead of saying, as in *Tarring* v. *Aldridge*, "You can disregard it altogether," laid it down that though it was not law it was recognised as a fair scale to be adopted, it would be a most excellent thing. It was gratifying to see that the amount of the balance of income over expenditure was £1,680, and that their capital was now £18,000 invested. It struck him, however, that the rent, £935, was rather a large amount for them to pay, and that it really represented five per cent. on a capital of £18,700. In conclusion, he thought that the Report should be received with considerable satisfaction.

MR. C. H. BRODIE [*F.*] referring to the paragraph on page 40, "The Council regret that so large a number of students remain on the list without proceeding to the Final Examination," suggested that a little gentle pressure might be brought to bear upon those men, which would force them into the Final Examination. This was an ordeal they certainly ought to face. If the Council had not already the power to take any action the Institute would have very little hesitation in granting it to them. It was satisfactory to read that no fewer than 1,400 persons visited the exhibition of Students' Drawings submitted for the Prizes and Studentships. It was also a matter for great congratulation to read such a paragraph as that appearing on page 43, where they learnt that the Council had done something at the invitation of his Majesty's Government. That was the kind of paragraph they would like to see plentifully scattered over the Annual Reports of the Institute. They would like to read that not only His Majesty's Government, but all the great municipalities and corporations, not only in this kingdom, but in the colonies, applied to the Institute when they wanted assistance, and he was quite sure that they would get the information they desired. There was a paragraph which stated that two of their body had been appointed by the Council to represent the Institute on a deputation to the Croydon Council with regard to the proposed demolition of the Whitgift Hospital there. Members would look forward with some anxiety to read the result of that deputation's visit. The memorial which was sent out by the Institute calling attention to the fact that works of magnitude should not be entrusted to engineers—for that was what it amounted to—had not perhaps received all the attention it deserved. He had made some special inquiries with reference to that matter, and in two cases in which he had been in a position to make such special inquiries he found that the memorial had not received any attention whatever. It was pointed out to him by members of those particular corporations that it might have been better perhaps if the Institute, in sending out the memorial, had asked that it should be referred to the proper committee. They all knew what took place at a meeting of a large and busy council. Something came up and the clerk said: "I have received a memorial"—and produced it; and then some gentleman at the table said: "What is it; does anyone know anything about it?" and nobody did. Then another man would promptly propose that it should lie on the table, and that was the end of it. He suggested that it would be wise to follow up that memorial by sending out a letter to the various bodies asking what had been done with it, and expressing a hope that it had been referred to the committee that dealt with matters of that kind. Another matter, which, he was delighted to know, had already been brought up, was the action of the Practice Committee, and afterwards of the Council, with reference to the newly-framed by-laws of the London County Council. Those by-laws were most drastic, most unnecessary, and of a most arbitrary character, and they should not be allowed to stand. It was perfectly monstrous the amount of work forced upon architects and the amount of costs forced upon owners in consequence of those new by-laws. Now that they had had a number of sympathetic replies from the various London municipalities, the time had come to follow up the sympathy by strenuous action. Those by-laws should be somehow "squelched"; they were useless and almost impossible, as he could give many instances to prove. Mr. Woodward had mentioned that a communication might be sent to the proper legal luminary as to the scale of charges; but he remembered that when he was Secretary to the Practice Committee some such communication had been sent. Perhaps the Secretary could tell them what was the result, and some reference might be made in the JOURNAL to the paragraph which no doubt appeared at the time. It was quite within his recollection that some such communication had been sent and that they received a favourable reply. The Report of the Practice Committee was always of an interesting character, and as he happened to know something about the work which that Committee did he was always pleased, in that room, to mention the fact that that Committee did an enormous quantity of work of a most valuable character, deserving the full consideration of the Institute and the Council of the Institute. He was particularly pleased to mention his colleague Mr. Greenop, for the enormous amount of work Mr. Greenop had done for the Institute was beyond all praise, and he was sure that every member of the Practice Committee present would agree with him. He mentioned last year the fact that the Report on the brickwork tests had not been published, and he was very pleased to read in the Report of the Science Standing Committee that the result of those tests was in print and would shortly be published. It was a great pity that they had not been published before. With regard to another part of the Institute work which was mainly the result of the work of the Practice Standing Committee—viz. the Easement of Lights Bill—he regretted to read, if it was the fact—he was not sure that he rightly understood it—that in the Bill there was to be no clause which should prevent after a certain date the accrual of rights to light. No Bill would be satisfactory which did not contain a clause to the effect that after a certain date no new ancient lights could possibly arise; and if any information could be given to the Institute on that particular point he should be exceedingly glad.

MR. A. A. HUDSON [*H.A.*] said that as two or three things had been said about counsel, perhaps he might say something in their defence. He did not know what Mr. Woodward's experience had been, but he did not think that the counsel who cross-examined him could have had much experience, because the last thing an experienced counsel would do would be to cross-examine any architect or surveyor in a hostile way, because any hostile cross-examination of that kind or offensive cross-examination, must recoil upon the person making it. He had known some of the most experienced cross-examiners, men who had had great experience of arbitration work, and he had never known them treat a professional witness offensively; in fact it would recoil upon themselves if they did. With regard to the scale of charges, he did not know whether he should be saying anything which was new to the Institute, but he had always regarded the scale of charge of 5 per cent. as one which was very undesirable; not that he thought that 5 per cent. was too much, but because he thought it was too little. As Lord Coleridge once said, it was a form of Trade Unionism. He had often to sit as arbitrator between masters and men, where workmen tried to regulate the scale of charges at so much per hour, and that was really trade unionism—they always tried to reduce everyone to a dead level. It seemed to him that there were architects chiefly in London, and some

distinguished men in the provinces, who were very badly paid at 5 per cent. The effect of the 5 per cent. was to level up the men who had only just joined the profession and were entitled to receive 5 per cent., with men who had spent years in the profession and years of study, and who still were only entitled to the same 5 per cent. No other profession was so treated. He should be very sorry if the Bar were to level everything down to a particular fee. He did not know how the Bar would exist if that were the case. Take the engineers. Nobody ever heard of the engineers fixing any particular scale. There were certain engineers who said, directly one entered their room, "We must have fifty guineas for opening our mouth. We do not talk to you under fifty guineas." He did not see why the architects should not do the same. It was a very undesirable thing that any scale levelling up and levelling down should be adopted. No one could legally take the scale of any body except as against themselves; so that the difficulty the Institute was in was this: that supposing a distinguished member of the Institute, who felt himself entitled, it may be, to 10 per cent., went into the box, it was said at once, "But you belong to a Society called the Royal Institute of British Architects, who say that their scale is 5 per cent. Surely you cannot charge beyond that." So that a distinguished man, or a man who might devote an enormous time to work, was tied to that 5 per cent. He was quite aware that there were rules saying that in particular cases of decorative work, and so on, the man was entitled to charge more; but that would not meet the case of exceptional ability. A man of exceptional ability should be entitled, if he pleased, to charge a very large sum. If he (the speaker) might put himself in the position of being an architect and a member of the Institute who had come to the top of the tree, he should feel very much inclined to retire because he could not charge the fees he wanted to. He thought it was a very serious thing for architects. He did not know what the Bar would say if their leaders were only allowed to charge what any junior could charge. It had been suggested that a letter should be written to either the Lord Chancellor or the Lord Chief Justice, recommending that this scale of charges should be more attended to than it had been. The difficulty of attending to any such application was that one could not get away from the rule that a person was entitled to be paid a reasonable charge. Now the only persons whose charges were regulated by Parliament were cabmen and solicitors. He did not know why they should wish to be in the position of cabmen, though they might wish perhaps to be in the position of solicitors. One word with regard to the London Building Act—and he was obliged to be guarded in what he had to say because of being a member of the tribunal; but he would suggest to the Institute that the desirable thing was to make an elastic Bill. At the same time elasticity wanted very careful guarding. If elasticity were given, the door would be open to bribery and corruption. Therefore it seemed to him that first of all there must be rules—that obviously must be the case. Secondly, there must be an opportunity for the Council to consent to variations of those rules; and, thirdly, there must be an appeal from that consent; but in order to avoid injustice to persons affected by such consent, a much wider area must be given to appeals, so that not only the person who had asked the consent and had been refused should be allowed an appeal, but his neighbours, for instance, if it were a request to bring out a front, who would be affected by it, should also have an opportunity to appeal against the consent. So that if elasticity is given, there must be checks upon it in order that it should not be an injustice to adjoining owners or to persons affected by the consent.

MR. DOUGLASS MATHEWS [*F.*], referring to the Bill dealing with the fire clauses, said that the suggestion which Mr. Woodward had made had been fully carried out by the Committee in charge of the matter. They had gone word by word through the Bill, as he did not think it had received that full consideration by the London County Council which was absolutely necessary for a measure of such importance; if the clauses were passed as they now stood they would be so impracticable that the Act would be a dead letter. That led him to refer to a remark made by Mr. Hudson. He was glad to find that the consideration the Committee had given to the matter coincided with what he had said. They did not mind what discretionary power was given either to the London County Council or the Superintending Architect or District Surveyor, provided their decisions were subject to the Tribunal of Appeal. What they felt was that they could not at present get to the fountain-head. The report made by their officers on applications might be favourable or unfavourable; one did not know whether their reports were taken or whether they were objected to by members of the Committee. Those who were interested in the matter of these applications should have an opportunity of going face to face with those who had to adjudicate. Therefore elasticity was absolutely necessary, not only with the fire clauses, but with the whole Act; and as an Act is to be brought forward next year, that was the basis the Committee had gone upon throughout. With reference to the demolition of buildings, Mr. Woodward was probably aware that by-laws had been made by the Corporation of the City of London for that very purpose; and through the action of the Institute, what would have been a most unworkable Bill had been made a workable one. The Committee expressed their opinions to the Corporation, and some of their suggestions they adopted, others they did not. The Committee, however, had deemed it of such importance that they had placed their suggestions before the Secretary of State prior to his approval being given. The Committee felt that the idea was a good one and should be carried out, not only in other parts of London, but also in the provinces. In the proposed amending Bill by the London County Council of next year this matter was to be dealt with.

MR. MAX CLARKE [*F.*] said that as Mr. Brodie had expressed his regret that the results of the tests of brickwork had not been published, he would not like that expression of regret to go to the members as implying any laxity either on the part of the Science Committee or of the officials of the Institute. The delay was entirely his, and he apologised at once to the Institute for being so late. The papers had been in print for some considerable time, and he had been asked to revise the documents, but he had been so busy that he had been unable to attend to it.

MR. MAURICE B. ADAMS [*F.*] said that Mr. Brodie had referred to the fact that some considerable number of students did not proceed to the end of their course. It struck him that that remark might be also applied with advantage to certain members of the Institute who remained Associates when one would think that they ought to become Fellows. He did not wish to make any invidious remarks, but it did seem a pity that many men—for instance, like the late Mr. S. J. Nicholl, whose work they had every reason to be proud of—should have remained to the end of a very long life only an Associate of the Institute. With regard to the treatment of architects in the Law Courts, where he happened to have had some little experience, nothing had struck him more with regret than that members of their profession should be prepared to come forward as expert witnesses and give such very variable views on certain questions of fact. Personally he had experienced great difficulty in getting architects of standing to come forward at all for that very reason. They felt that it was such an unpleasant matter to go into Court and be met by persons who were prepared to give evidence in the particular way they did, which was far too common; and so they declined to come forward to give evidence where

they could otherwise have been of the utmost service in the cause of justice. Anybody who had had experience of the Courts recognised that counsel sometimes were constrained in cross-examination to adopt methods which otherwise they would not do in consequence of what is here alluded to, and architects had therefore a great deal to blame themselves for in the want of respect shown them sometimes in the Courts. He had listened to cases from which he had come away heartily ashamed that men should be prepared to give evidence in that way. With regard to fees, Mr. Hudson had told them that an engineer would tell a client plainly at once that his fee before he began to talk about the matter he was consulted on would be say fifty guineas. He supposed an architect might do the same; there was no reason why an architect should not charge ten per cent. if his position warranted it; and no doubt he did do so. He himself was repeatedly asked by clients when first approaching him what his charges were, and it was quite obviously only business to state them at once; and this he always did. If architects made a rule of doing this, half the cases that were brought into the Courts would not have to be tried at all. It was a very simple matter. If a copy of the scale of charges were sent to the client and he were told at the outset, "Those are my charges," the Court would not for one moment have occasion to discuss the matter. The client being told at the outset what the fees were, there was an end of the matter.

MR. E. W. HUDSON said he should not like it to go forth that there was any similarity in the work and charges of architects and the briefing of learned counsel, as Mr. A. A. Hudson had suggested. The former was liable to be taxed upon the scale of the Institute if he did not bargain for a larger fee on account of his "eminence" beforehand, and he was bound to carry out with reasonable skill and proficiency every item he charged for. Barristers received an honorarium, and the extent of attention any particular case received from a leading counsel was undefined, and much was left to juniors when the former were, as often happened, in another Court.

MR. ALFRED DARBYSHIRE [*F.*] referred to the onerous duties performed by their Hon. Auditors, Mr. Sydney Perks [*F.*] and Mr. H. A. Crouch [*A.*], and asked that the best thanks of the Institute be accorded them for their services. — The vote, having been seconded by Mr. Herbert Davis [*F.*], was carried by acclamation, and briefly responded to by Mr. Sydney Perks.

THE CHAIRMAN, replying to the questions raised during the discussion, said that with regard to the sum of £50, expenses in connection with the Registration Bill, that sum was put down entirely for expenses of solicitors and counsel in attending the meetings and in assisting in the drafting of the Bills which had been before the Committee. As regards the sum of £500 put down for the International Congress to be held next year, he could not say at present how that money was to be expended; but they hoped and intended to do their best to carry out the Congress in a manner worthy of the Institute, and commensurate with its importance. They in England suffered to a considerable extent from the fact that they did not, as other countries, get any grant from the Government towards the expenses of a Congress of this kind. There was no doubt that the expenses would be very heavy indeed—probably four or five times as large as the sum provided—but those expenses would all be properly returned, so that they could see how the money had been spent. With regard to the Sub-Committee on the Education of the Public, no doubt it was rather a difficult matter. The public wanted a good deal of educating, but it was not at all an impossible thing to take such steps as would conduce in some way to a better appreciation by the public of architectural works. It had always appeared to him a very lamentable thing that whenever a building was referred to in any of the non-professional journals or papers, the author was usually a man who knew absolutely nothing about the subject he was writing about; he wrote in a manner which was most misleading to the public, and which did not convey the least idea of what the building was like, or lead to any intelligent appreciation of it. A Committee of this kind might bring some influence to bear upon the editors of the public Press. It might suggest to them that when such articles had to be written they should be written by a person who knew what he was writing about. That was one way in which the education of the public might be assisted in architectural matters, and no doubt when the Committee made its report they would have a good many valuable suggestions. With regard to the Memorial as to the employment of public officials, Mr. Brodie had expressed an opinion that in all probability in many cases the document had been put on one side, and would have no effect at all. He also suggested that the memorial might with advantage be followed up by a letter reviving the attention of the Corporations to that memorial. That suggestion, no doubt, would be considered; but he thought himself that although perhaps in many cases the Memorial had been laid on one side, it would still not be without its effect. In every Corporation there was always an opposition; and he thought it would give them a handle, in all probability, with which they might worry those members of their body who were wishful to consult a very doubtful economy, to the detriment of efficiency With regard to the scale of charges there was no doubt that the Institute scale was open to a great many objections, and it did not meet many cases which arose. He quite sympathised with what Mr. Hudson had said, that a man who was in an eminent position was expected to be content with the same fees as a beginner in the profession. But that was not the intention of the scale of charges as it stood. The intention was that it should be a sort of minimum; that when a man got into such a position that he could demand a higher scale of remuneration, he was perfectly at liberty to do so—of course, if he gave his client due notice in the first instance that he intended to do so. The scale of charges, however, was now being referred to the consideration of the Practice Committee with a view to its reconsideration and to the drawing-up of what they hoped would be a more satisfactory scale.

The Report, having been put to the meeting, was then carried unanimously.

9, CONDUIT STREET, LONDON, W., *6th May* 1905.

CHRONICLE.

ARCHITECTURAL COMPETITIONS.

After the business special to the Annual General Meeting was concluded last Monday, the Meeting proceeded to the discussion of the Paper on the Conduct of Architectural Competitions as revised by the Competitions Committee, and which they propose should be issued under the title "Regulations for Architectural Competitions." The amended Paper is as follows:—

REGULATIONS FOR ARCHITECTURAL COMPETITIONS.

APPROVED BY THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

If the Promoters of an intended Competition desire Members of the Royal Institute of British Architects to take part therein, the Conditions should be based on the following Suggestions:—

1. The Promoters of an intended Competition should, AS THEIR FIRST STEP, appoint one or more professional Assessors, architects of established reputation, whose appointment should be published in the original advertisements and instructions. The selection of an Assessor should be made with the greatest possible care, as the successful result of the Competition will depend very largely upon his experience and ability.

   The President of the Royal Institute of British Architects is always prepared to act as honorary adviser to Promoters in their appointment of Assessors.

   All the designs sent in should be submitted to the Assessors.

2. The duty of Assessors should be, after conference with the Promoters—
   (*a*) To draw up the particulars, conditions, and suggestions in accordance with the principles herein set forth as Instructions to Competitors, such documents to be so drawn up as to form an agreement between the Promoters and the Competitors, and also to advise the Promoters upon the question of cost and the amount and apportionment of the premium or premiums.
   (*b*) To determine whether the designs conform to the instructions, and to exclude any which do not.
   (*c*) To advise the Promoters on the relative merits of the designs admitted to the Competition, and to make a selection in accordance with the instructions.

   Note.—It is essential in drawing up the Instructions to state definitely which of the conditions must be strictly adhered to, and those which are merely optional or of a suggestive character.

3. No Promoter of a Competition, and no Assessor engaged upon it, nor any employee of either, should compete, or act as architect, for the proposed work.
4. The number, scale, and method of finishing of the required drawings should be distinctly set forth, and they should not be more in number, or to a larger scale, than necessary to clearly explain the design, and such drawings should be uniform in size, number, mode of colouring, and mounting. If the Assessor advises that perspective drawings are desirable, it should be so stated.
5. Competitions should be conducted in one of the following ways:—
   (*a*) By advertisement, inviting architects willing to compete for the intended work to send in designs. The Promoters, with the advice of the Assessor or Assessors, should make their selection from such designs. The author of the design awarded the first place should be employed to carry out the work.
   (*b*) By advertisement, inviting architects willing to compete for the intended work to send in their names by a given day; with such other information as the candidate may think likely to advance his claim to be admitted to the Competition. From these names the Promoters, with the advice of the Assessor or Assessors, should select a limited number to compete, and each Competitor thus selected should receive a specified sum for the preparation of his design. The author of the design awarded the first place should be employed to carry out the work.
   (*c*) By personal invitation to a limited number of selected architects, to join in a Competition for the intended work. Each Competitor should receive a specified sum for the preparation of his design. The author of the design awarded the first place should be employed to carry out the work.
6. No design should bear any motto, device, or distinguishing mark; but all designs should be numbered by the Promoters in order of receipt. Any attempt to influence the decision of the Promoters, or of the Assessor or Assessors, should disqualify a Competitor.
7. The author of the design placed first by the Assessor or Assessors should be employed to carry out the work, and he should be paid in accordance with the Schedule of Charges sanctioned and published by the Royal Institute. If no instructions are given to him to proceed within twelve months from the date of selection, or if the proposed works are abandoned by the Promoters, then the selected architect should receive payment for his services in connection with the preparation of the competition drawings of a sum equal to 1½ per cent. on the amount of the estimated expenditure.
8. In every case the amount of premium or remuneration for the competitive designs, other than that placed first, should be fixed under the advice of the Assessor or Assessors.
9. Where a deposit is required for supplying the Instructions, it should be returned on the receipt of a *bona fide* design; or if the applicant declines to compete and returns the said Instructions, within a month

after the receipt of replies to Competitor's questions. The deposit required should not exceed the sum of one guinea.

10. Each design should be accompanied by a declaration, signed by the Competitor, stating that the design is his own personal work, and that the drawings have been prepared under his own supervision.
11. A design should be excluded from a Competition
    (*a*) if sent in after the period named (accidents in transit excepted);
    (*b*) if it does not substantially give the accommodation asked for;
    (*c*) if it exceeds the limits of site as shown on the plan issued by the Promoters, the figured dimensions on which should be adhered to;
    (*d*) if the Assessor or Assessors should determine that its probable cost will exceed by 10 per cent. the outlay stated in the Instructions, or the estimate of the Competitor should no outlay be stated. If the Assessor or Assessors be of opinion that the outlay stated in the Instructions is inadequate, he or they shall not be bound in the selection of a design by the amount named in such Instructions, but the question of cost shall nevertheless be a material element in the consideration of the award;
    (*e*) if any of the other Instructions are violated.
12. It is desirable that all designs and reports submitted in a Competition, except any excluded under Clause 12, should, with the consent of their authors, be publicly exhibited after the award has been made, which award should be published at the time of exhibition. At the close of the exhibition all the designs, with the exception of the one placed first, should be returned, carriage paid, to their authors.
13. It is essential to the success of any Competition that the Promoters should agree in their Instructions that the award of the Assessor should be adhered to unless there is some valid objection to the employment of the author of the design placed first, as to which the Assessor should be satisfied.
14. Except in the case of works of inconsiderable magnitude it is desirable that two or more Assessors should be appointed. As stated above, the President of the Institute is always ready to advise on this or other points.

*** *The R.I.B.A. Scale of Charges for Assessing Competitions is at the minimum rate of Thirty Guineas plus ½ per cent. upon the estimated cost of the proposed building.*

The adoption of the revised Paper having been moved by the Chairman (Mr. H. T. Hare, *Vice-President*),

Mr. EDWIN T. HALL [*F.*] said there were one or two slight verbal alterations he should like to call attention to. In the *Note* to No. 2, last line but one, the word "those" ought to come out. In No. 7 he suggested that an addition should be made to the effect that if the architect was subsequently employed, then the 1¼ per cent. previously paid should merge in his commission. That had been put in in one or two recent competitions, and it was perfectly reasonable. The addition might read, "If the said author should be subsequently employed, the 1¼ per cent. previously paid to him should merge in his ultimate commission."

The CHAIRMAN: I have no doubt the Competitions Committee would accept that, because I think that is really their meaning and intention.

Mr. HALL: Then in No. 8 why should not the assessor fix the remuneration of the man who is placed first? Let the clause read: "In every case the amount of premium or remuneration for the competitive designs should be fixed under the advice of the assessor or assessors," leaving out the words "other than that placed first."

The CHAIRMAN: It is suggested that there should be no first premium.

Mr. HALL: But it is a very common practice to give an honorarium to everybody; and why should the man who is fortunate enough to be placed first not have the same remuneration as the others? It sometimes happens in a big competition that the first set of drawings is of no value because the promoters change their mind. There is no reason why, if there are six competitors, all the six should not have a fee, and that sufficiently remunerates the man for his design if it is done away with.

The CHAIRMAN: You suggest that the words "other than that placed first" should be omitted?

Mr. HALL: Certainly.

The CHAIRMAN: I think there is no harm in that.

Mr. HALL: Then there is a clerical error in the second line of No. 12; it should read "except any excluded under clause 11," instead of "clause 12." Then the last sentence of clause 12: "At the close of the exhibition all the designs, 'with the exception of the one placed first,' should be returned, carriage paid, to their authors." Why put in those words at all?—there is no advantage in it. The first man wants his drawings back to go on with the working drawings.

The CHAIRMAN: Quite so.

Mr. HALL: Then in No. 14: "Except in the case of works of inconsiderable magnitude, it is desirable that two or more assessors should be appointed." I venture to ask the reconsideration of that as a matter of principle. I think it would often be most embarrassing and most troublesome, and in certain cases impossible. Supposing it is a very large institution indeed—a very large hospital or a very large lunatic asylum—it would be very difficult indeed for two assessors to deal with such a thing. You might have three; but to have two I believe is a grave mistake. Personally I think that, given the right assessor, you cannot have better than one. Whether you always get the right assessor or not I cannot say. But I feel sure that you cannot get on with two. What is going to happen if they disagree? You would be without an assessor at all.

Mr. A. W. S. CROSS [*F.*]: It says "two or more."

Mr. HALL: Then may I suggest that two, at all events, is a mistake? If you press this upon the public, it means their paying two or three assessors instead of one. Now no one would be satisfied in any big work if they were not three eminent men; and if they are, how are you going to induce any big employer, committee, council, or corporation to pay three expensive fees to do one service? The effect will be that you will not get the assessor at all. In the interest of all of us I strongly urge that it should not be put as it is. It would be much better to leave the thing alone, and say "an assessor."

Mr. MAURICE B. ADAMS [*F.*]: I think Mr. Hall has rather overlooked this point, that there should not be an excessive fee paid to any one assessor at all. We ought rather to consider the position of an assessor as a very honourable one, and those who rank leaders of the profession should be willing to undertake the duty for a somewhat more moderate fee than has often hitherto been paid. Looking at it from that point of view, if the public were enabled to secure three assessors for a moderate fee, probably for a little more than they can at present secure the services of one man for, it would be very much better for everyone that there should be at least three assessors for undertakings of a certain magnitude. We all know by bitter experience that there have been occasions when the most lamentable results have followed the appointment of a single assessor, even where no question arose as to whether the assessor had done what he personally felt to be the right

thing. All individuals are liable to act upon a preconceived idea of what is a good type of plan for the building in question, and so judge the plans from that particular point of view, at the same time failing to observe many other things that ought to be taken into consideration; whereas if the assessor had the advantage of a second and a third person to point out to him what he had overlooked, some of those disastrous results which have taken place, and will continue to take place, would be obviated. If we approach the subject from the point of view that it is an honour to be asked to assess, and that we should be willing to do so for a moderate fee, in the interest of everyone concerned, the public would soon fall in with such a scheme, and not only the public, but architects themselves, and, above all, good building would be benefited.

MR. H. HARDWICKE LANGSTON [*A.*] called attention to some ambiguity in the wording of Clause 2. "The duty of Assessors should be, after conference with the promoters—(*a*) To draw up the particulars, conditions, and suggestions in accordance with the principles herein set forth as Instructions to Competitors." The "principles herein set forth," he pointed out, are not instructions to competitors. He thought the old wording was infinitely better, and he asked that it might be altered back again to what it was in the KALENDAR.

It was ultimately agreed, on the proposal of MR. HALL, to substitute for the words "in accordance with the principles herein set forth" the words "in accordance with these regulations," with a comma after.

MR. GEORGE HUBBARD [*F.*], having called attention to the opening words of Clause 14, "Except in the case of works of inconsiderable magnitude," the SECRETARY explained that it was a slip, and that it was intended to read, "In the case of works of considerable magnitude."

MR. HUBBARD: Then it strikes me that Mr. Hall's suggestion is a perfectly sound one. We shall not help matters forward very much if we have two assessors who might disagree. If it is acceptable to the Meeting, I would suggest that the word "three" should be substituted for "two." Then the clause will read, "In the case of works of considerable magnitude it is desirable that three assessors should be appointed." I do not think you want the words "or more."

MR. LANGSTON: I will second that, Sir.

THE CHAIRMAN: Would it meet the case if it read, "In the case of works of considerable magnitude it is desirable that more than one assessor should be appointed"?

MR. HUBBARD: Then you might be brought again to the difficulty that Mr. Hall has raised.

THE CHAIRMAN: The point is that promoters may hesitate to appoint so many.

MR. LANGSTON: Not if the fee was reduced.

MR. HALL: Might I say just one word on the question of fee, because it is important? You must not forget one thing, that an employer values your opinion at your own valuation of yourself. Take the case of a civil engineer who is appointed either as an arbitrator or as an assessor. He charges a much heavier fee than we ever think of charging. And he gets it. And his opinion is respected.

MR. C. E HUTCHINSON [*A.*]: The whole matter of the question of fees is clearly settled by the little note at the bottom which states "The R.I.B.A. Scale of Charges for Assessing Competitions is at the minimum rate of Thirty Guineas plus ½ per cent. upon the estimated cost of the proposed building"—there is an end to the whole matter.

MR. BRODIE [*F.*]: No, it is not an end of it. If you are going to ask people to pay three times that, you must state it in the clause, and I agree with Mr. Hall that you will not get it.

MR. E. T. HALL: See what that means on a half-million job. The fee would be £1,000. No assessor I have ever heard of has got such a fee, and I am quite sure if you asked that you would not get an assessor appointed.

THE CHAIRMAN: I think, Mr. Hall, you have imagined a very extreme case. If you take the scale suggested for any case up to, say, £150,000, which is as big a job as one usually gets, you will find it works out reasonably well; it would be £300. That would not be too heavy.

MR. BRODIE: But even that would mean £900 if you appoint three assessors.

MR. HUTCHINSON: The intention, I take it, was to divide the fee into three.

MR. H. W. WILLS [*A.*]: And if three men were employed as assessors, presumably there would be less work for each than a single assessor would have.

MR. HALL: If each assessor does his work honestly I think he will have quite as much to do. Otherwise there is no value in having three.

MR. WILLS: Three men assessing a job would naturally work together, and the views of the two would have some weight with the third. It is like a sub-committee.

MR. HALL: I only advise you not to kill the goose that lays the golden eggs.

MR. HUBBARD: I cannot quite follow Mr. Hall's view. He tells us in one breath that you are taken at your own valuation—that if your fee is a high one you are respected. But now he says: If you ask a high fee you will not be employed. Surely it is a little incompatible.

MR. HALL: The point is this, whether it is a £500,000 job or a £100 job it more or less takes you the same time to do. It is not a question of the value of the building.

MR. HUBBARD: Surely the case would be satisfactorily settled by the suggestion that was made that the fee on those very large jobs, which would be paid in the ordinary way to one assessor, should be divided amongst the three. That surely meets the case, and it could be expressed in a note at the bottom.

MR. G. A. T. MIDDLETON [*A.*]: So far as I see, it is expressed at the bottom; it is the scale for assessing a competition, not the scale for each assessor, whether one or three.

MR. JOHN SLATER [*F.*]: I think very strongly that it is a most undesirable thing to attempt to lay down any scale of charges for assessing competitions. You may have one competition where there are a very large number of competitors for a £50,000 job which will take you a great deal longer than another competition for a £100,000 job. Every individual case must be assessed at its own value. I feel very strongly that any scale of charges for assessing competitions should be kept out of the document altogether, and I will move that the whole reference in the note to the Scale of Charges be omitted.

MR. HALL: I will second that. But at the present time we are on the former point. I will move as regards the number of assessors that the words "two or more" be omitted.

MR. DARBYSHIRE: I second that.

THE CHAIRMAN: In that case you omit the clause entirely.

MR. HALL: Yes, leaving in the last sentence as a sort of tag to the whole.

THE CHAIRMAN: You do not really need that, because it is stated at the beginning of the document. The whole clause would go out.

MR. HALL: Yes, Sir, I move the omission of Clause 14.

The motion was put to the Meeting and lost.

MR. HUBBARD: Now, Sir, I move that the clause shall be altered as follows: "In the case of works of considerable magnitude, it is desirable that three Assessors should be appointed," and then it will continue as here. "As stated above, the President of the Institute is always ready to advise on this or other points."

THE CHAIRMAN: Would it meet your views if it read thus: "In the case of works of considerable magnitude

it may be desirable that more than one Assessor be appointed"?

MR. HUBBARD: No; then you might get the same confusion that we have here. It should be one or three. I think Mr. Hall's point is perfectly sound there.

MR. HALL: I would urge that there should be grave consideration given to this, even if it is sent back to the Committee. Remember we are looking after our own interests, and all the voting here is in our interest. But we have to consider the public; and, if we put before them a burden too heavy for them to bear, it will be to the ruin of our interests. If you say to them, "Because this job is large you must appoint three Assessors," they will not appoint one; I believe that will be the effect. I come in contact with a number of these big bodies, and I know how difficult it is to persuade them. We have to consider the interests of the public in this matter, and unless we can justify ourselves in the face of the public we shall never get them to listen to us.

MR. HUBBARD: But I am not suggesting any further burden upon the public. I think Mr. Middleton's interpretation of the note at the bottom is correct, that the charge for assessing a competition is a minimum rate of thirty guineas, plus $\frac{1}{2}$ per cent. upon the estimated cost of the proposed building; whether you have one assessor or whether you have fifty, that is the charge for assessing; I therefore press forward my amendment.

MR. WILLS: I beg to second it.

MR. SLATER: I shall certainly move (whatever the amendment to this clause) the omission of any scale of charges, because I am perfectly certain it would work very hardly indeed upon members of this Institute, and everybody concerned with it.

MR. CROSS: The public have a right naturally to know the charges that will be made for assessing competitions.

MR. BERTRAM BULMER [*F.*] supported Mr. Slater's view. It was exceedingly desirable, he said, that the matter should be left open, so that promoters could make their own arrangement with assessors as regards charges. His opinion was partly founded upon an experience of his own during the past year, when a body promoting a competition applied to the Institute to appoint an assessor, and this assessor was requested to state his charges. It happened that those charges were on so high a scale that the promoters felt, as their building was to a certain extent a tentative matter, that they were unable to afford them. They then looked round for somebody else, and he (the speaker) was approached in the matter, and asked what his fee would be. He should mention that he was in absolute ignorance of the circumstances, except that he was asked what his fee would be. He mentioned a sum and assessed the work, and was well paid for it. When all was concluded, he was told, after expressing his satisfaction at the fee received, that it was exactly half the fee which had been asked by the assessor appointed by the Institute. That went to show that there were limits to the amount promoters were prepared to pay for assessorship. He thought that the arrangements Mr. Slater favoured were in conformity with the view expressed by the learned counsel Mr. Hudson in his remarks on the scale of charges, that elasticity in these matters is the principle to be adopted. Therefore he had much pleasure in supporting the view of Mr. Slater.

MR. HUBBARD: Has the question of fees anything to do with this Clause 14?

MR. SLATER: Mr. Hubbard distinctly said he should support Clause 14 as it stood with three assessors, because of the note at the bottom.

MR. HUBBARD: No. I support Clause 14; but Mr. Hall says the public would not pay for three assessors, and that is why I brought in the note at the bottom.

MR. SLATER: I shall move the omission of the note, at all events.

THE CHAIRMAN: Will you give me the words of your amendment again, Mr. Hubbard?

MR. HUBBARD: My amendment is: "In the case of works of considerable magnitude it is desirable that three assessors should be appointed," and then the rest will continue as printed.

MR. MAURICE B. ADAMS said that even with the paragraph at the end of the clause it was always open to the President of the Institute to advise and to explain to promoters the exact position of affairs. He entirely disagreed with Mr. Hall's objection to three assessors. Experience had shown that it was absolutely necessary that there should be three assessors in important competitions, and he thought it would be a great pity to mix up the question of their payment for the moment with the principle which was involved in the appointment of three assessors. The question should stand or fall by its merits, and not be mixed up in any way with the question of payment. As to how the assessors were to be paid, that question would best be approached in the spirit he had just referred to. If in the ordinary way a single individual would have £300, then the work of assessing could be more efficiently done by three, each receiving £100. There was nothing small or petty about that. But the question of the three assessors should be threshed out on its own merits. The question of payment had far better be settled afterwards.

Mr. Hubbard's amendment was then put and carried.

MR. SLATER: I beg now to move the omission of the note as to a scale of charges altogether.

MR. HUTCHINSON: In the case of a very large job a commission of 30 guineas plus $\frac{1}{2}$ per cent. would, of course, be out of all reason. But on an average small job that rate would not be at all unreasonable. The matter might be met by inserting the words "with the exception of works of very considerable magnitude" at the beginning of the note about the scale of charges. If that would meet the case, I should like to propose it.

MR. SLATER: But that just shows how very difficult it is to lay down any scale at all. You have the three assessors; let the matter of charge be threshed out between the promoters and the President of the Institute.

MR. MIDDLETON: I should like to second Mr. Slater's amendment, Sir; I believe he is right. I have known of cases of very small competitions where even this minimum would be a great deal too high.

Mr. Slater's amendment to omit the note was then put and carried.

MR. HUTCHINSON: With regard to the second paragraph of Clause 1, "The President of the Royal Institute of British Architects is always prepared to act as honorary adviser to the promoters in their appointment of assessors," that is referred to again in the last clause, 14. I suggest that it would be advisable to say "The President and Council of the Royal Institute of British Architects."

MR. CROSS: I beg to second that.

THE CHAIRMAN: It would be an extremely difficult matter for the Council to advise promoters.

MR. HUTCHINSON: It is important, because if you take Clause 5 there are several methods by which we suggest competitions may be carried on. There is also the question of the selection of assessors and many other points. I bring this forward because the general body of members are affected by competitions, and they feel that they would prefer to be represented by the whole body of the Council.

THE CHAIRMAN: Anyone who has ever acted on the Council must realise how absolutely impossible such a thing would be to work. You never could get the Council to advise promoters. Must all the correspondence be brought before the Council and considered by them? It would be impossible to carry out.

MR. HUTCHINSON: There has been one very import-

ant case decided quite recently which was brought before the Council, and, as I understand, a ballot was taken among the whole of the Council. That precedent is such a happy one that we ought to have it included in these regulations so that it should be permanent.

MR. CROSS: I think the wording should be "The President after consultation with the Council."

THE CHAIRMAN: As a matter of fact, the President always does take the Council into his confidence when there is any matter of importance like the one Mr. Hutchinson refers to where a ballot was taken. The President was asked in that case to nominate certain architects, and he did not take that responsibility upon himself, but asked the Council to ballot for them.

MR. HUTCHINSON: I may say that if the words "and Council" are included, and there is any case brought formally before the Council, they still have the power, if they think fit, to appoint the President to act on their behalf and use his discretion.

MR. HALL: Can a matter like this be brought forward without notice? It is a question of absolutely new practice which has never been considered in any case. I am quite as much interested as anyone; I am a competitor myself. But this is enunciating a new principle on which the President's opinion has not been taken.

THE CHAIRMAN: For years it has been one of the prerogatives of the President to have this nomination in his hands; and it is rather upsetting what has become a precedent to suggest that it should be taken from him and put into the hands of the Council. It seems to me that the Institute, through its President, has got into a very important position. The President is regarded in his official position by promoters of competitions with a very considerable amount of confidence; and, if you put in anything of this sort about the Council, it will be very derogatory to the President in his official position, and tend to take away confidence from him.

THE SECRETARY: May I say that in very many cases promoters ask the President of the Institute to appoint an assessor almost by return of post? Supposing he were asked to-morrow, the promoters could not be requested to wait a fortnight until the next Council Meeting. And what would happen in the recess? This is a practical matter I venture to bring before the Meeting.

MR. LANGSTON: There cannot be conferred upon the President any prerogative except such as is given him by Charter, and it certainly is not in the by-laws that this power is to be vested solely in the President. It may have accrued to him through long custom; but that does not show that he has a right to it.

MR. HUBBARD: From a public point of view, it is quite possible that the promoters might wish to have the individual opinion of the President, and not the opinion of the Council.

THE CHAIRMAN: I think that is the case in many instances. But I would suggest, as a way out of the difficulty, that if this particular point were referred to the Competitions Committee to consider, it might avoid our coming to a hasty decision now which we might be sorry for. It has been once or twice suggested by members that it would be a good thing if a small sub-committee of the Council, say two or three members, were appointed as an advisory committee to assist the President when he has these selections to make. That Committee would be in existence, so that the President could confer with them privately if he wished. Such a proposition as that might very properly be sent forward to the Council by the Competitions Committee, and, if that were done, the matter could be thoroughly threshed out both by the Committee and the Council.

MR. HUTCHINSON: I take it, Sir, that it would naturally follow, if this resolution were carried now, as I ask, that the Council would take some such means as the appointment of a small Committee so as to avoid calling special meetings for such a purpose. It is in their power to do so; and it is with the sole object of having the Council represented on these matters that I have brought the subject up.

THE CHAIRMAN: My only point was that before it should be decided that such a course should be taken it should be thoroughly and carefully considered in the Competitions Committee. We have not a proper opportunity in a meeting like this, and at this late hour, to consider the matter thoroughly as we ought to do. If your resolution were adopted now it would go forward to the Council as a resolution of the general body in this room which could not be escaped from.

MR. MIDDLETON: I would propose, Sir, that all the amendments put forward to-night should go back for consideration by the Competitions Committee, who probably will accept them all, except perhaps this one, which they will consider in detail.

MR. HUBBARD: Having regard, Sir, to the very few members now present, I think it would be hardly fair to take a binding resolution upon such an important question. I think your suggestion that it should be referred back to the Competitions Committee is an extremely wise one. I therefore move, as an amendment to Mr. Hutchinson's motion, that the matter be referred back to the Competitions Committee.

MR. LANGSTON: I second that.

MR. CROSS: I support the original proposition of Mr. Hutchinson. I think it is simply shelving the matter to refer it back.

THE CHAIRMAN: It is open to me to adjourn the meeting. I think, under all the circumstances, the best course will be to defer this question, together with Mr. Bonner's motion which is on the agenda, to the Business Meeting of the 5th June.

After some further discussion the proceedings closed, and the meeting stood adjourned to Monday, 5th June, upon Mr. Hubbard's amendment to Mr. Hutchinson's motion.

THE ANNUAL ELECTIONS.

New Nominations.

The following nominations of members to serve as Vice-Presidents and as Members of Council respectively for the ensuing year of office have been made by Fellows and Associates in accordance with By-law 30:—

As Vice-Presidents.

HALL, EDWIN THOMAS: Nominated by Alexander Graham, Leonard Stokes, John Slater, Ernest George, Henry T. Hare, *Fellows*; William A. Forsyth, R. S. Balfour, *Associates*. [Withdrawn from candidature as Member of Council.]

TAYLOR, SIR JOHN, K.C.B.: Nominated by Ernest George, Sir Aston Webb, R.A., E. Ingress Bell, Alexander Graham, John W. Simpson, And. N. Prentice, *Fellows*; Maxwell Ayrton, *Associate*.

As Members of Council.

ADAMS, MAURICE BINGHAM: Nominated by G. F. Bodley, R.A., W. M. Fawcett, W. E. Riley, F. M. Simpson, Rowland Plumbe, E. M. Bruce Vaughan, Cole A. Adams, Philip Hy. Tree, E. Swinfen Harris, J. Edward K. Cutts, *Fellows*; George Frampton, R.A., *Hon. Associate*; F. M. Harvey, *Associate*.

AYLING, ROBERT STEPHEN: Nominated by C. E. Mallows, Alfred W. S. Cross, A. Burnell Burnell, Alexander C. Forrester, Arthur Ardron, *Fellows*; Arnold S. Tayler, Bruce Dawson, William C. Hulbert, *Associates*.

BAGGALLAY, FRANK: Nominated by John Slater, Alexander Graham, Sir Aston Webb, R.A., John W. Simpson, Ernest George, *Fellows*; R. S. Balfour, William A. Forsyth, *Associates*.

BILSON, JOHN: Nominated by William A. Pite, Beresford Pite, Wm. H. Atkin Berry, Ernest George, Alexander Graham, John Slater, *Fellows*; William A. Forsyth, *Associate*.

BURNET, JOHN JAMES, A.R.S.A. (Glasgow): Nominated by John Slater, Alexander Graham, Ernest George, Wm. H. Atkin Berry, B. Ingelow, *Fellows*; R. S. Balfour, William A. Forsyth, Thomas A. Pole, *Associates*.

CARÖE, WILLIAM DOUGLAS, M.A.Cantab., F.S.A.: Nominated by Alexander Graham, Ernest George, Sir Aston Webb, R.A., John W. Simpson, John Slater, *Fellows*; R. S. Balfour, William A. Forsyth, *Associates*.

CROSS, ALFRED WILLIAM STEPHENS, M.A. Cantab.: Nominated by Butler Wilson, W. Gillbee Scott, Lewis Solomon, George Bertram Bulmer, S. Perkins Pick, James S. Gibson, George Hubbard, *Fellows*; C. E. Hutchinson, Horace T. Bonner, *Associates*. [Withdrawn from candidature as Vice-President.]

DAVIS, HERBERT: Nominated by John W. Simpson, F. R. Farrow, Wm. Flockhart, Wm. H. Atkin Berry, J. Douglass Mathews, John Slater, Edmund Wimperis, *Fellows*. [Mr. Davis was nominated by the Council, but his name was inadvertently omitted from the House List.]

GIBBS, EDWARD MITCHEL (Sheffield): Nominated, first, by Joseph Smith, W. J. Hale, Chas. B. Flockton, George Hubbard, *Fellows*; H. L. Paterson, Henry J. Potter, James R. Wigfull, *Associates*. Secondly, by Butler Wilson, George Hubbard, George Bertram Bulmer, Alfred W. S. Cross, *Fellows*; George Fox, Horace T. Bonner, C. E. Hutchinson, *Associates*.

GOTCH, JOHN ALFRED, F.S.A.: Nominated by Alexander Graham, Ernest George, B. Ingelow, Wm. H. Atkin Berry, John Slater, *Fellows*; R. S. Balfour, William A. Forsyth, Thomas A. Pole, *Associates*.

GRUNING, EDWARD AUGUSTUS: Nominated by Alexander Graham, John Slater, John W. Simpson, Sir Aston Webb, R.A., Ernest George, Wm. H. Atkin Berry, *Fellows*; R. S. Balfour, *Associate*.

HUBBARD, GEORGE: Nominated by Butler Wilson, W. Gillbee Scott, Lewis Solomon, George Bertram Bulmer, S. Perkins Pick, James S. Gibson, Alfred W. S. Cross, *Fellows*; C. E. Hutchinson, Horace T. Bonner, *Associates*. [Withdrawn from candidature as Vice-President.]

MOUNTFORD, EDWARD WILLIAM: Nominated by John Slater, Alexander Graham, B. Ingelow, Ernest George, Wm. H. Atkin Berry, *Fellows*; R. S. Balfour, William A. Forsyth, Thomas A. Pole, *Associates*.

PRENTICE, ANDREW NOBLE: Nominated by John W. Simpson, John Slater, Wm. H. Atkin Berry, Alexander Graham, Ernest George, *Fellows*; William A. Forsyth, Thomas A. Pole, *Associates*.

PRYNNE, GEORGE HALFORD FELLOWES: Nominated by Alexander Graham, Sir Aston Webb, R.A., Wm. H. Atkin Berry, John W. Simpson, B. Ingelow, John Slater, Ernest George, *Fellows*; R. S. Balfour, William A. Forsyth, *Associates*.

TOWNSEND, CHARLES HARRISON: Nominated by John Slater, Wm. H. Atkin Berry, Alexander Graham, Ernest George, *Fellows*; William A. Forsyth, R. S. Balfour, Thomas A. Pole, *Associates*.

WATERHOUSE, PAUL, M.A.Oxon: Nominated by John W. Simpson, Alexander Graham, John Slater, Sir Aston Webb, R.A., Ernest George, *Fellows*; William A. Forsyth, R. S. Balfour, *Associates*.

AS ASSOCIATE MEMBERS OF COUNCIL.

FORSYTH, WILLIAM ADAM: Nominated by John Slater, B. Ingelow, Wm. H. Atkin Berry, Alexander Graham, Ernest George, *Fellows*; R. S. Balfour, Thomas A. Pole, *Associates*.

PRYCE, THOMAS EDWARD: Nominated by Ernest George, And. N. Prentice, Alexander Graham, John W. Simpson, Sir Aston Webb, R.A., John Slater, *Fellows*; Maxwell Ayrton, *Associate*.

YOUNG, ERNEST ALEXANDER: Nominated by W. A. Longmore, A. Saxon Snell, Mark J. Lansdell, Walter J. Burrows, *Fellows*; A. Spottiswood Jones, Harold Griffiths, E. Godfrey Page, *Associates*.

Garden Design in Italy.

Mr. H. Inigo Triggs [*A.*], encouraged by the reception accorded his "Formal Gardens in England and Scotland," has now in preparation a work on similar lines dealing with "Formal Gardens in Italy." The work is to consist of an historical essay dealing with garden planning in Italy since the early days of the Roman Republic. The plans, drawings, and sketches, which are to form a principal feature of the work, will be supplemented by a series of reproductions of photographs specially taken by Mrs. Aubrey Le Blond. The illustrations will consist of plans; gate entrances and lodges; terraces, balustrades, and steps; seats, casinos, pavilions, summer-houses, &c.; fountains, ponds, cascades; well-heads; statuary and vases in lead and stone, &c.

Mr. Triggs has spent a considerable time in Italy collecting information for his work, and he writes that he will be grateful to members of the Institute who possess any plans or engravings, or

who have made studies of the planning and arrangement of Italian villas and their garden architecture, if they would lend such studies or communicate with him. Probably among the Travelling Students of the Institute there may be some who have studied the subject. Mr. Triggs's address is 8 South Parade, Bedford Park, W.

Dinner to the President.

A complimentary dinner was given to the President on the 11th ult., at the Florence Restaurant, by his past and present assistants and pupils. The chair was taken by Mr. J. W. James, who was supported by Professors Beresford Pite and C. M. Reilly, and Messrs. J. J. Joass, A. Needham Wilson, P. M. Johnston, T. P. Figgis, H. G. Ibberson, H. C. Corlette, W. D. Belcher, A. H. Belcher, R. Lindsay, A. R. Hennell, M. Maberly Smith, E. A. Hill, Gilbert Robinson, T. H. Russell, J. R. Scott, A. L. Belcher, T. R. Chalmers, A. R. Conder, H. Anderson, A. F. Murray, L. Detmar, Val Meyer, H. Johnstone, F. J. W. Hart, A. Balfour Paul, H. Hopwood, A. C. Wallace, and A. George. The toast "Our Guest" was proposed by the Chairman, supported by Professor Pite, Mr. Joass, and Mr. P. M. Johnston. The speakers all accepted the occasion as an opportunity to express their appreciation of Mr. Belcher as an artist and of the great ability evident in his works; and also to show their esteem for him as a man whose influence and personality they valued so much. They also warmly congratulated him on his having been elected an A.R.A., and on his more recent honour in being made President of the Institute. Mr. Belcher, in his reply, acknowledged the pleasure it had given him to be present, and referred to the friendly relations which had always obtained between the members of his staff and himself.

The late Lord Grimthorpe.

Lord Grimthorpe, who has just passed away in his ninetieth year, was at one time an Hon. Associate of the Institute, and took a considerable interest in its affairs. Sir Edmund Beckett, as his style was prior to his elevation to the peerage, was among the first batch of Hon. Associates elected when that class was established in 1877. He resigned in 1884, presumably as a protest against the attitude taken up by the profession in regard to his work at St. Albans. The history of this famous controversy from Lord Grimthorpe's point of view is told in his *St. Albans Cathedral and its Restoration*, and again in his *Book on Building*. The cost of the restoration, amounting to between £130,000 and £140,000, he defrayed entirely himself. He was his own architect, and the custodians of the building allowed him a free hand. The *Standard* of the 1st May, in an interesting notice of Lord Grimthorpe, recalls an amusing story told in connection with the restoration of an old church near Malton. The plans were submitted to him, and seeing a sketch of two large buttresses on each side of the chancel, he drew his pen through them and wrote: "These must come out. I suppose the architect intends them to be Early English." As a matter of fact the buttresses were really there, and had been for centuries.

REGISTRATION OF ARCHITECTS.

68 *Aldersgate Street, London, E.C.: 2nd May* 1905.

To the Editor JOURNAL R.I.B.A.—

It has occurred to me that if members of the Institute were entitled to call themselves "chartered architects" it would prove a great benefit to them, and the public would soon learn that if they wanted a duly qualified man they could not do better than employ a "chartered architect." The accountants, as we all know, have derived considerable advantage by adopting this idea.

I should be glad to hear the opinion of other members on this point, and perhaps it is one that the Registration Committee of the Council will deem worthy of their consideration.

I am, Sir, yours faithfully,

PERCY B. TUBBS [*F.*].

GLASGOW INSTITUTE OF ARCHITECTS.

The thirty-seventh annual report of the Council of the Glasgow Institute states that in regard to the proposed reconstruction of the Royal Infirmary, Glasgow, a communication had been received from the Glasgow Archæological Society, intimating that they had appointed a committee to co-operate with the Glasgow Institute and kindred associations, with a view to opposing the adoption of any design which would result in permanent injury to the external effect of Glasgow Cathedral, and recommending the preparation of a drawing for publication, showing the Cathedral and reconstructed Infirmary side by side, so that the dwarfing effect of the latter might be realised by the public. A committee was thereupon appointed to deal with the matter, and with powers to obtain the drawing suggested. The Glasgow Art Club have also appointed a committee in connection with the matter. The joint-committee representing the three bodies mentioned have had several meetings, and, although no formal report has yet been submitted by it, it is understood that the drawings have been prepared, with the result that the apprehensions felt and expressed by the Glasgow Institute have been fully justified. A committee, the report states, is considering the question of the amalgamation of the Glasgow Architectural Association with the Glasgow Institute.

LEGAL.

London Building Act: Fees for Tenement Buildings.

MARSLAND *v.* FRAMPTON AND SHEFFIELD.

At Lambeth Police Court on 28th April, before Mr. Francis, Messrs. Frampton and Sheffield were summoned by Mr. Ellis Marsland, District Surveyor for the district of Camberwell, for the recovery of fees due in respect of twenty-eight houses erected by the defendants for the Camberwell Borough Council.

The houses were situated in Oglander Road and Oxenford Road. Two of the number were simple houses, but the remaining twenty-six were tenement buildings; each building measured under eight squares in area and two stories in height. The houses containing two tenements were constructed with one tenement on the ground floor, having an entrance door at the front, giving direct access to the tenement, and with a second tenement on the first floor, to which access is obtained by a separate entrance door and a staircase. The entrance doors to the two tenements were side by side, and were within a common porch recessed about three feet within the main front wall of the building and under one arch. There were also separate means of approach from each tenement to the yard in the rear, one by a doorway and the other by an iron staircase. It was not possible to pass from one tenement to the other without passing out of one entrance door into the common porch and in at the other entrance door, or by passing through the yard in the rear. The fee on these buildings, amounting to £3 10*s.* each, was assessed on the basis of "fee and a half," it being claimed that they came within the proviso to the 3rd Schedule, that in the case of buildings divided into separate sets of chambers or tenements by party structures the fee is to be increased by one half. For the defence it was contended that only a fee on the single scale was due.

Mr. W. C. Williams, who appeared for the District Surveyor, urged that the buildings came within the proviso to the schedule. The tenements had in fact "separate entrances from without," and the circumstance that the two entrances had a porch in common did not affect the issue, as each tenant could lock his own front door, and so keep his tenement to himself.

Mr. G. S. Roberts for the defence urged that a separate entrance from without must mean from without the building as a whole, and that existence of the recessed porch therefore precluded these tenements from coming within the proviso; there was no difference between a porch three feet deep and a passage fifty feet long or a staircase fifty feet high; there was only one staircase, not staircases in each building.

Mr. Francis asked whether it was contended that "these were not separate tenements," and referred to the case of blocks of flats as coming within the proviso; these usually had one common staircase from which the flats opened.

Mr. Roberts replied that they had no separate entrance from without, but only a common entrance, and that if the magistrate decided against him he would be deciding the case of blocks of flats as well.

Mr. Francis replied, "You are inviting me to say it is not from without because it is from within the lobby."

In giving his decision, Mr. Francis said that it was always interesting to have an argument of this sort, especially when the learned counsel who raised it admitted it was a highly technical one; but in his opinion the buildings came within the proviso, and the District Surveyor was therefore entitled to the extra half-fee. "Separate entrances from without" meant a separate entrance from without each individual tenement, not necessarily from without the building. There would be judgment for £95 5*s.* and £2 7*s.* costs.

MINUTES. XIII.

At the Seventy-first Annual General Meeting (being the Thirteenth General Meeting of the Session 1904–05) held Monday, 1st May 1905, at 8 p.m.—Present, Mr. Henry T. Hare, *Vice-President*, in the chair, 29 Fellows (including 13 members of the Council), 34 Associates (including 1 member of the Council), and 1 Hon. Associate: the Minutes of the Meeting held 17th April [p. 404] were taken as read and signed as correct.

The Hon. Secretary announced the decease of Hedley John Price, of Nottingham, *Associate*, elected 1884.

The following Associates attending for the first time since their election were formally admitted and signed the register—viz. Claude Batley and Percy Aspden Horrocks.

Reference was made to the death of Lord Grimthorpe, a past Hon. Associate of the Institute, and the Chairman stated that a note thereon would appear in the JOURNAL.

The Report of the Council for the official year 1904–05, which had been previously circulated among members in the United Kingdom, having been formally presented and taken as read, was moved for adoption by the Chairman. The Report was then discussed, and the Meeting finally

RESOLVED, *nem. con.*, that the Report of the Council for the official year 1904–5 be approved and adopted.

A vote of thanks was passed to Messrs. Sydney Perks [*F.*] and H. A. Crouch [*A.*] for their services as Hon. Auditors of the year's accounts; and Messrs. Sydney Perks [*F.*] and W. A. Webb [*A.*] were nominated Hon. Auditors for the ensuing year of office.

The Meeting authorised the Council to appoint scrutineers to direct the election of the Officers, Council, and Standing Committees for the year of office 1905–06, and to report the result thereof to the Business General Meeting of the 5th June.

The existing Statutory Board of Examiners was reappointed, and Mr. William Grellier [*F.*] was added as a member of the Board.

The Meeting then proceeded to the discussion of the Institute Paper on the Conduct of Architectural Competitions as revised by the Competitions Committee,* its adoption being first moved by the Chairman. A few slight amendments† proposed by Mr. Edwin T. Hall [*F.*] were accepted by the Chairman, but a proposal by Mr. Hall to omit clause 14 was put to the Meeting and negatived. An amendment by Mr. George Hubbard [*F.*], F.S.A., seconded by Mr. H. W. Wills [*A.*] that the first part of clause 14 should read "In the case of works of considerable magnitude it is desirable that three assessors should be appointed" was put to the Meeting and carried. A motion by Mr. John Slater [*F.*] seconded by Mr. G. A. T. Middleton [*A.*] to omit altogether the note as to the R.I.B.A. Scale of Fees for assessing competitions was put to the Meeting and carried. A motion by Mr. C. E. Hutchinson [*A.*] seconded by Mr. A. W. S. Cross [*F.*] that the Council should be associated with the President in advising promoters in their appointment of assessors was discussed, and an amendment moved by Mr. George Hubbard, seconded by Mr. H. Hardwicke Langston [*A.*], that the matter be referred back to the Competitions Committee. The Chairman, having regard to the lateness of the hour, the few members present, and the importance of the question involved, declined to put either motion or amendment, and adjourned the discussion to the Business Meeting of the 5th June—the adjournment taking place upon Mr. Hubbard's amendment to Mr. Hutchinson's motion.

The proceedings closed, and the Meeting separated at 10.20 p.m.

---

* The revised Paper as presented to the Meeting is set out at length on page 449.

† See discussion, page 450.